Application of the Integrative Causal Model of Anti-social Behaviour to the Behaviour Problems of Pre-school Children

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Application of the Integrative Causal Model of Anti-social Behaviour to the Behaviour Problems of Pre-school Children

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ABSTRACT

Objectives: This study applied the Integrative Causal Model of Antisocial Behaviour to the behaviour of preschool behaviour in an attempt to increase understanding of the origins of preschool behaviour problems. Three hypotheses were generated:

- Predisposing factors and social factors combined would account for more of the variance in child behaviour than either set of factors alone.
- Oppositional temperament would be the more predictive of child behaviour than the remaining predisposing factors.
- Harsh discipline and low tolerance for difficult behaviour would be more predictive of child behaviour than lax supervision or parental antisocial behaviour.

Design: A cross sectional, within subjects design was used with a community sample.

Method: Forty parent-child dyads opted-in to the study. Parents completed questionnaires regarding: child behaviour and temperament; their discipline and supervision of the child and their psychological well being, stress and degree of antisocial behaviour while the child's verbal ability was assessed. Basic demographic data was also obtained.

Results: The main results were:

- Predisposing factors and social factors combined were more predictive of preschool behaviour than either alone;
- More specifically socioeconomic status, harm avoidant temperament and parental antisocial behaviour combined were most predictive of preschool behaviour;
- Harm avoidant temperament and harsh physical discipline were the most significant single predictors of preschool behaviour.

Conclusions: The Integrative Causal Model of Antisocial Behaviour was of limited value for understanding preschool behaviour problems. It may be that different factors are implicated in the development of early behaviour problems compared to antisocial behaviour.

CONTENTS

1.0 INTRODUCTION

1.1 Overview

This section of the dissertation is concerned with setting the scene for the research. It begins with brief definitions of the subject matter, along with prevalence figures, prognosis and service provision issues. Pertinent theoretical viewpoints and the empirical findings to date are outlined and the section ends with the research questions and hypotheses posed.

1.2 Childhood Behaviour Problems

1.2.1 Definitions

Some debate exists regarding the definition of childhood behaviour problems. The debate exists for three main reasons. Firstly, there are no agreed definitions of behaviour problems, what is perceived as problematic behaviour depends on parental expectations, experiences, attitudes and resources (Stallard, 1993). Secondly, some of the behaviours are developmentally appropriate in this age group. Thirdly, in the literature the term childhood behaviour problems has been used to include diagnosable conditions such as Attention Deficit Hyperactivity Disorder (ADHD), Conduct Disorder (CD), Oppositional Defiant Disorder (ODD), Disruptive Behaviour Disorders as well as children described as "hard to manage " and "antisocial ".

Screening instruments are often the means by which behaviour problems are classified. A number of commonly used tools exist, some of which provide total problem scores and some of which provide scores for particular types of problems. Childhood behaviour problems are often classified into two broad categories - externalising and internalising problems . Externalising problems include: overactivity, poor impulse control, noncompliance, tantrums and aggression, while internalising problems include: anxiety, sadness, social withdrawal and fearfulness.

1.2.2 Prevalence

Problematic behaviours are found to increase from around 2 - 3 years of age (Jenkins, Bax & Hart, 1980). Richman, Stevenson & Graham (1975) in their classic epidemiological study of three year old children in London found that 7 % of those sampled had moderate to severe problems and 15% had mild behaviour problems. More recently Sonuga-Barke, Thompson, Stevenson & Viney, (1997) found that 54% of preschool children had mild behaviour problems and 10% had severe problems and Davis, Day, Cox & Cutler (2000)

found that 63% of preschool children (in a deprived inner city sample) had between one and ten psychosocial problems.

According to Stallard (1993) it is not the behaviour, the number of behaviours, or the severity of the problems which are necessarily important, rather it is how the behaviours are perceived by the parents, the effect the behaviours have on the family and the degree of concern the behaviours generate, that is important. Research suggests that between 23% and 66% of parents of three year old children have concerns about their child's behaviour (Jenkins et al 1986, Stallard, 1993). Common concerns are: defiance and management difficulties, overactivity, inattention, poor relationships with siblings and peers, demanding too much attention, temper tantrums, sleeping and feeding problems, fears and phobias (Campbell, 1995, Jenkins et al, 1986, Davis et al, 2000). As mentioned earlier, while these problems may be developmentally appropriate, and for some therefore potentially transitory, they cause considerable distress and families often report that they would welcome advice and support with such problems (Jenkins et al, 1986, Stallard 1993).

1.2.3 Prognosis

There is a growing body of literature, both prospective and retrospective, that shows that many preschool behaviour problems are not transitory and are often associated with significant relationship problems within the family (Pound, Cox, Puckering & Mills, 1985). Richman, Stevenson & Graham, (1982) found that 63% of those whose behaviour was deemed problematic at three years of age continued to show problematic behaviour at four years of age, and 62% had problematic behaviour at eight years of age. McGee, Partridge, Williams & Silva (1991) examined a birth cohort and found that those described as 'difficult to manage' at three years of age were rated as being more problematic at aged 9, 11 and 15 years. A more recent study by Campbell (1995) suggested that problems are more likely to persist in boys. Seventy three percent of boys with problematic behaviour at three years of age were reported to have problematic behaviour at eight years of age.

Bennett, Lipman, Brown, Racine, Boyle & Offord, (1999) suggest that disruptive behaviour symptoms in childhood are associated with increased risk for multiple, serious negative health and psychosocial outcomes in adolescence and adulthood (e.g. antisocial behaviour, poor school and job performance, substance abuse and depression).

1.2.4 Service Provision

As well as behaviour problems having an impact on the child and its family, they have a far reaching impact on a a range of Health Service provisions as well as the Education and Social Services. For example, 30% of general practitioner consultations involving children are for behaviour problems and 45% of referrals to community child health services are for behaviour problems. Accident and emergency departments cope with many accidents and poisonings in children and adolescents with behavioural problems. Children and adolescents who go on to develop extreme behavioural problems (e.g. conduct disorder and antisocial behaviour) are not only great users of health, social and educational services, an estimated average yearly cost of £8,270 per child per year (Knapp, Scott & Davies, 1999), but they are at increased risk of physical abuse as parents attempt discipline (Herbert, 1995).

Despite the seriousness of such behaviour problems, existing specialist services are limited and are often described as inadequate. Cox (1993) estimates that 80-90% of children with psychosocial difficulties never reach specialist services. Herbert (1991) suggests that those with lesser difficulties are more likely to receive therapy. He argues that behavioural disorders are increasing and that demand is far exceeding the resources available. Davis, Spurr, Cox, Lynch, Van Roenne, & Hahn, (1997) suggest that, given such inadequacies in service provision, it is important to find alternative means of helping families overcome the problems they experience.

1.2.5 Intervention

Davis et al (2000) describe a number of voluntary programmes of parent education and support (e.g. Newpin - Pound & Mills, 1985) and befriending schemes (e.g. Home-start - Van der Eyken, 1990 and Friends United Network- Davis, Cox, Cutler, Stevenson, Cottrell, Davis & Clarke, 1995) designed to help families deal with problematic behaviours and the associated distress. As yet, the majority of such schemes are operated within the voluntary sector. Developing preventative or early intervention strategies from within the NHS is one possible way of managing scarce resources and reducing the distress childhood behaviour problems create for children and families. While early intervention and prevention strategies are argued to be an appropriate use of resources within the NHS, they are thought to be unpopular with referrers if the development of such services means that existing child and adolescent mental health services are eroded, referrers want earlier

interventions for families but also 'want difficult problems off their hands'(Cox, 1993).

The government paper, The Health of the Nation: a strategy for health in England (1992), agrees that the mental health of children and adolescents is an important area to tackle, recognising that ill health in the early years has serious implications for well being in adult life. Others argue that the prevention and treatment of childhood emotional and behavioural problems is crucial in its own right, rather than just being a means of avoiding adult disorder (Cox, 1993).

Understanding the nature of the development of problematic behaviours is crucial, as is an accurate method of identifying those in need of intervention if preventive or early intervention strategies are to be employed as means of targeting scarce resources (Bennett, Lipman, Brown, Racine, Boyle & Offord, 1999).

1.2.6 Summary

Debate exist regarding the definition of behaviour problems and screening tools are often the means by which they are classified in the preschool population. Behaviour problems increase around 2-3 year of age and are evident in a significant proportion of preschoolers. Typical concerns are: defiance, tantrums, sleeping and feeding problems, relationship difficulties, overactivity, fears and phobias. Such problems not only cause the family distress but place excessive demand on a range of existing services. Existing services are inadequate, given the demand, and a greater understanding of preschool behaviour problems may allow for greater targeting of scarce resources into preventive or early intervention strategies.

1.3 Theoretical Context and Empirical Findings

1.3.1 Individual Risk Factors

A number of factors have been found to be associated with childhood behaviour problems including: maternal depression (Cox, 1988), child temperament (Thomas, Chess & Birch, 1968), low socio economic status (Campbell, March, Pierce & Ewing 1991), living in council accommodation (Richman, 1977), marital discord (Rutter, 1982), family dysfunction (Minde, Goldberg, Perrotta, Washington, Lojkasek & Parker, 1989), parental chronic physical illness (Rutter, 1966), parental criminality (Rutter & Giller, 1983), parental personality disorder (Rutter & Quinton 1984), parental disagreement regarding child rearing practices

(Shaw, Keenan & Vondra, 1994) and so on. Such observations suggest that behavioural problems are multifactorial in origin.

More recently, research has moved beyond the investigation of individual risk factors to provide more comprehensive models of the development of childhood behaviour problems. These models have been developed to explain the origin and maintenance of specific, diagnosable, behavioural problems, notably conditions such as Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder and a range of Antisocial behaviours. In addition, the models have tended to focus exclusively on the behaviour of male children and adolescents, probably a reflection of the fact that such behaviours are significantly more common in males than females. While such disorders are seldom diagnosed prior to school age, when diagnosis is made at a later stage, parents often recall early irritability and uncooperativeness (Robins, 1991) and defiance and discipline problems (Campbell, Breaux, Ewing & Szumowski, 1984).

1.3.2 Developmental Theories

One important developmental theory, the coercive process theory (Patterson, 1982), attempts to explain oppositional behaviour. It argues that oppositional behaviour is a learned 'coercive' strategy by which the child exerts control over parental behaviour. The process begins with an oppositional child and a parent with fundamental parenting deficits. If the child is commanded by an adult to behave in a specific way, or comply with a request, the child typically responds with temper and rage. In response, if the parent insists on compliance, the child increases their oppositional behaviour and so on until a pattern of interacting develops. If the child's response is intense and persistent the parent may concede to the child. However, the parent may not always give in to the child and thus an intermittent schedule of reinforcement occurs. Thus not only is the child's behaviour reinforced, but the parents surrender is reinforced, by the cessation of the child's tantrum, making both parties behaviours more likely to occur in the future. This 'negative reinforcement trap' (Wahler, 1969) is more likely to reinforce behaviour problems and ignore or punish pro social behaviour and increase the risk of child abuse as the parent searches for effective discipline methods (Lahey, Conger, Atkeson & Treiber, 1984).
A second developmental theory of note is Loeber's (1988a) theory of antisocial behaviour. He argues that there are different types of antisocial behaviour with distinct pathways. Firstly, the aggressive/versatile path, whose onset is typically in the preschool years.

Children who develop this type of behaviour problem tends to have problems with attention, impulsivity and hyperactivity and poor social and relationship skills with both adults and peers. This group tends to display a variety of antisocial behaviours including physical aggression, theft, truancy and drug use. Their behaviour is disruptive in both the home and school environments and they are at risk of academic failure and dropping out of school. Significantly more males than females are said to follow the aggressive pathway. Secondly, the nonaggressive path. Whose onset is typically in late childhood or early adolescence. Children who develop this type of behaviour problem tend to have good relationships with their parents, are popular with peers and have no inherent learning problems, although they typically refuse to engage in academic work. This group tends to display nonaggressive behaviours such as lying, theft, truancy and /or substance use, often in the company of their peers. The majority of children in this group desist in being antisocial sometime during adolescence. Again more males than females are said to follow this pathway, but the ratio of males to females is higher than in the aggressive group. Thirdly, the exclusive substance abuse path. Here the onset of the problem typically begins in middle to late adolescence and problems are exclusively related to substance use.

The final developmental theory of note is Moffitt's (1993a, 1993b) which argues that there are two routes to developing antisocial behaviour. Firstly, the lifetime persistent route. This is the name given to antisocial behaviours that develop in early childhood, continue through adolescence and into adulthood. 'Lifetime persistent' antisocial behaviour is thought to be the product of deficits in neurological (memory, language, executive and self control) functioning. These deficits are thought to disrupt normal development and produce toddlers with cognitive delay and difficult, undercontrolled temperaments (Moffitt, Caspi, Dickson, Silva & Stanton, 1996). Support for this theory comes from Speltz, DeKlyen, Calderon, Greenberg & Fisher (1999) who found that preschool boys with externalising problems (namely oppositional defiant disorder and attention deficit hyperactivity disorder) had lower full scale IQ's, an increased chance of performance IQ being higher than verbal IQ and poor performance on tests of executive functioning compared to matched controls. These findings are supportive of earlier research in the field which reported various neurological deficits in children with behaviour problems. For example, Richman, Stevenson & Graham, (1982) found that three year old children with behaviour problems scored lower on tests of receptive language and visual motor co-ordination. McGee et al (1991) found that children with 'pervasive hyperactivity' scored lower on tests of both

cognition and language, and that such differences remained apparent when re-tested at 15 years of age. Campbell, Szumowski, Ewing, Gluck & Breaux (1982) reported lower IQ in 'hard to manage' preschoolers, while Heller, Baker, Henker, & Hinshaw (1996) found that preschoolers with 'pervasive externalising problems' scored lower on tests of expressive language, but did not differ from peers in terms of overall IQ scores.

According to Moffitt et al, (1996), childhood antisocial behaviour persists due to repeated interactions between the child and the environment. The child's antisocial style invites rejection by peers and academic failure and leads to the development of an antisocial personality structure. 'Adolescent limited' antisocial behaviour, in contrast, is limited to the teenage years. It is thought to develop once relatively well functioning young people develop an awareness of the desirability of adult lifestyles and privileges, while such remain forbidden or unattainable to them via prosocial means. Observation of antisocial peers' success in attaining such 'desirables' leads to the imitation of antisocial peers and the engagement in antisocial behaviours. Once this group age and the desirables can be attained by prosocial means antisocial behaviour tends to desist. According to Moffitt (1993a, 1993b) those with early onset antisocial behaviour (lifetime persistent) are more likely to engage in more serious antisocial behaviour compared to the adolescent persistent group.

1.3.3 Individual Difference or Propensity Theories

Two influential individual difference or propensity theories in the field are those of Gottfredson & Hirschi (1990) and Farrington (1990). According to Gottfredson & Hirschi, (1990) individual differences in: impulsivity, daring, low intelligence, high activity levels and physical strength predispose children to the development of behavioural problems and antisocial behaviour.

Farrington (1990), however, suggests that the likelihood of engaging in antisocial behaviour depends on both the individuals antisocial tendency to behave in such a way and the suspected consequences of such behaviour. Antisocial tendency depends on within person variables (such as boredom, frustration, anger and alcohol consumption) which energise the person to engage in an antisocial act. Once energised, antisocial behaviour is more likely if the person habitually chooses socially disapproving means of satisfying their desires. This drive can be inhibited by beliefs that antisocial acts are wrong

(based on past experience of punishment and the ability to think in more abstract terms) and by empathy for others (developed via warm and loving parental relationships). Conversely, the drive can be increased by an environment which condones antisocial behaviour (modelling by antisocial parents, peers, schools and communities). This antisocial tendency is transformed into an antisocial act at the decision making stage once the opportunities, costs and benefits and expected outcomes are considered. It is also influenced by events that occur following the act which explains the dynamic nature of antisocial behaviour.

1.3.4 The Integrative Causal Model (Lahey, Waldman & Mc Burnett, 1999)

Lahey et al (1999) offer an integrated theory of the origins and development of problematic behaviour during childhood and adolescence, specifically antisocial behaviour [1] . The model is influenced by both developmental (especially the coercive process model) and individual propensity theories and combines them to provide a causal model of antisocial behaviour. It will be described in detail overleaf, along with the empirical support for the model and a diagrammatic representation.

Lahey et al (1999) propose that individual differences in antisocial behaviour can be explained by differences in a single construct - antisocial propensity. Antisocial propensity is thought to be the net result of genetically influenced factors, namely specific temperament[2] characteristics and cognitive ability. These 'predisposing variables' are said to be transformed into antisocial behaviour via multiple interactions with the social world, including: parenting styles, peer influences and socioeconomic status amongst other factors (see Figure 1). Genetic factors are thought to be more influential in the development of early onset problematic behaviour whereas social factors are thought to be more influential in problematic behaviour developed in puberty and adolescence. The factors implicated in the model are predicted to have at least an additive effect, the authors make no other predictions about the interplay at present.

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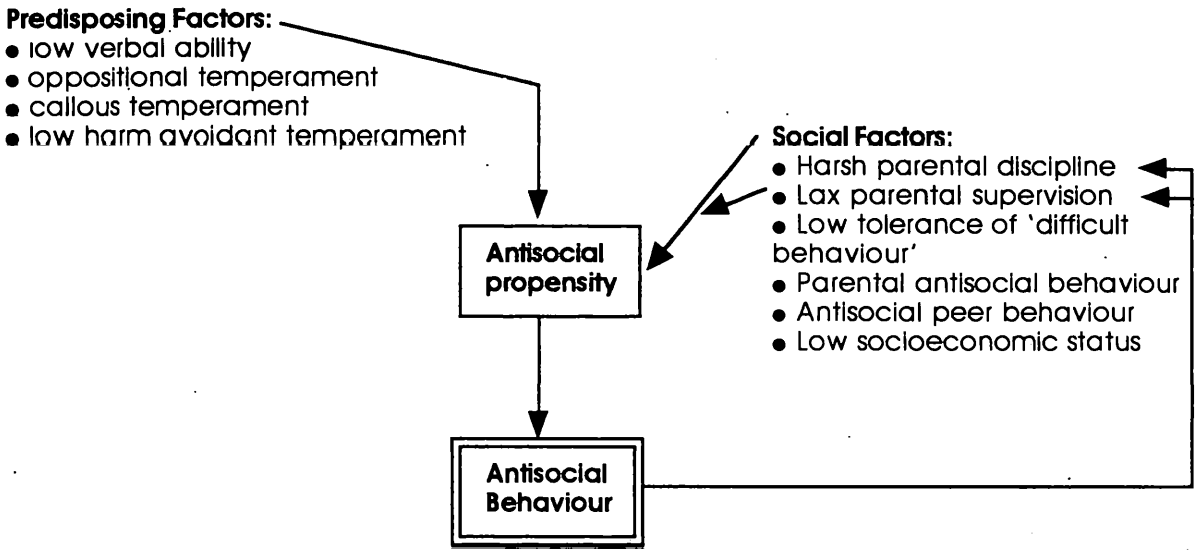
[1] defiance, aggression and violating people, property, or people's rights (Lahey, Waldman & McBurnett, 1999).

[2] heritable individual differences in socioemotional responses which emerge in early infancy and childhood (Buss & Plomin, 1975)

Figure 1: The Integrative Causal Model of Antisocial Behaviour (Lahey et al, 1999).



1.3.4.1 Verbal Ability

One of the predisposing factors thought to contribute to antisocial propensity is verbal ability. There is some discussion about whether it is cognitive ability, per se, or verbal ability more specifically, which contributes to antisocial propensity. Lynham, Moffitt & Stouthamer-Loeber, (1993) found that better developed cognitive skills, particularly verbal abilities, were protective against the development of antisocial behaviour. The argument being that preschool children with better communication skills are easier to socialise and consequently less frustrating to their parents. Youths with greater cognitive abilities are thought to be more able to think about the consequences of their antisocial actions and adopt more pro-social behaviours.

1.3.4.2 Temperament

Three temperament characteristics are said to contribute to antisocial propensity. Firstly, oppositional or difficult temperament (Bates, Bayles, Bennett, Ridge and Brown, 1991). This temperament style is characterised, in infancy, by resistance to contact, temper tantrums, irritability and anger. By early childhood these characteristics are transformed into arguing, vindictiveness, intentionally annoying others, defiance and blaming others for misbehaviours (Sanson, Smart, Prior & Oberklaid, 1993). Research suggests that preschool children rated as oppositional and hyperactive, compared to peers, were later observed to display antisocial behaviour (Moffitt, Caspi, Dickson, Silva & Stanton, 1996). In addition, those who were rated as oppositional and hyperactive were later also more likely to have

convictions for violent offences (Henry, Caspi, Moffitt, & Silva, 1996), suggesting a strong association between oppositional behaviour and antisocial behaviour. It is oppositionality that is thought to be the predisposing factor that contributes most strongly to antisocial propensity.

The secondly temperament dimension thought to contribute to antisocial propensity is low harm avoidance, a term coined by Cloninger (1987) and also known as 'behavioural inhibition' (Kagan, 1994). Those high in harm avoidance are typically cautious, shy, inhibited and apprehensive. This temperament dimension is said to protect against the development of antisocial behaviour in puberty, adolescence and beyond. Tremblay, Pihl, Vitaro & Dobkin, 1994, found that those rated as high on harm avoidance in preschool years were less likely, compared to their peers, to engage in antisocial behaviour during puberty and adolescence. Sigvardson, Bohman & Cloninger, 1987) found that 11 year olds with high harm avoidance scores were less likely to have been convicted of a crime by the age of 27. Thus high levels of inhibitory harm avoidance appear to protect children from the development of antisocial behaviour, whereas the reverse appears to be true for low levels.

The third temperament dimension thought to contribute to antisocial propensity is callousness, or reward dependence (Cloninger, 1987). Those low in reward dependence or high in callousness are said to: display little empathy or concern for others; prefer to be alone; care little about winning the approval of others; have reduced needs for friends; are unhelpful, selfish and unsympathetic. Research suggests that preschool children, who are rated as high in reward dependence and therefore low in callousness, are less likely to engage in antisocial behaviour in puberty and adolescence (Tremblay, et al, 1994). Cohen and Strayer (1996) report that youths with higher levels of conduct problems have lower levels of empathy and guilt and are less likely to avert their gaze from a film showing a child being hurt (Eisenberg, Fabes, Guthrie, Murphy, Maszk, Holmgren & Suh, 1996). Thus callousness is thought to be an enduring individual difference which increases the risk of developing antisocial behaviour.

1.3.4.3 Parental Antisocial Behaviour

Research suggests that adolescents with high levels of antisocial behaviour are more likely than their non antisocial counterparts to have a biological parent who engages in chronic

antisocial behaviour (Farrington, 1995) and parents who do not define antisocial behaviour as something to be discouraged (Gottfredson & Hirschi, 1990). No such relationship has been reported to date for preschool children.

1.3.4.5 Parenting Behaviours

Harsh discipline, especially physical discipline, and poor parental supervision have been found to be associated with higher levels of antisocial behaviour (DeKlyen, Speltz & Greenberg, 1998; Dishion & McMahon, 1998). Variations in these parenting variables are thought to have differing influences at different stages of the development of antisocial behaviour. For example, the use of harsh physical discipline may have its effect from toddlerhood. However, lax parental supervision is thought to have its greatest influence in late childhood and adolescence, when less time spent under parental supervision means more time spent with peers (Reid & Patterson ,1989). In the preschool years low parental supervision is associated with accidental poisoning, exposure to household hazards and playground accidents. In adolescence it is associated with fire setting and early substance use (Dishion & McMahon, 1998). Parents own experiences of being supervised and the beliefs they hold about supervision affect their monitoring of their children, as does the relative safety of the community. In addition the quality of the parent-child relationship, and the history of such, influences the extent of supervision. Patterson, Reid & Dishion (1992) found that a history of parenting failure is likely to undermine the parent-child relationship, reduce parental motivation for supervision and lead to the use of less effective behaviour management techniques. Stoolmiller (1994) adds that the more deviant the child, the more likely s/he is to avoid parental attempts to monitor their whereabouts.

It is suggested that cognitively and temperamentally disposed children are unlikely to develop antisocial behaviour if they are raised in adaptive social environments (Reid & Patterson, 1989). However, such child characteristics tend to bring out the coercive, harsh, inconsistent and negative parenting practices which transform the antisocial propensity into antisocial behaviour (Patterson 1982, Snyder, 1991). The effects are that the child's behaviour becomes increasingly difficult and challenging and parents efforts to supervise the children appropriately and use positive parenting strategies decline, increasing the likelihood of developing ongoing antisocial behaviour. Dumas & Wahler (1995) observed that mothers of children with problem behaviour tend to punish prosocial behaviour and

reward aversive behaviour. Mothers also report more problems disciplining their problem children and experience more negative interactions (Barron & Earls, 1984).

1.3.4.5 Parental Tolerance

The final parental factor implicated in the development of antisocial behaviour is parental tolerance for difficult behaviour. Some parents are more tolerant than others of difficult and challenging behaviour in their children. Research suggests that parents differ in their tolerance thresholds due to stable individual differences (e.g. depression and antisocial behaviour - Patterson et al, 1989) or factors which fluctuate over time (e.g. alcohol consumption and daily hassles - Lahey, Conger, Atkeson & Treiber, 1984). In support of this hypothesis Richman et al (1982) found that children with behaviour problems are more likely to have mothers with symptoms of depression and general ill health. In addition Campbell et al (1991) noted that the families of children with behaviour problems are more likely to have experienced more stressful life events in the previous year compared to controls, including factors such as parental divorce or separation or the reconstitution of a family.

1.3.4.6 Peer Influence

Peer influence is an additional variable implicated in the development of antisocial behaviour. Research suggests that children with early onset antisocial behaviour tend to have fewer well behaved friends than their non antisocial counterparts (Tremblay, Masse, Vitaro & Donkin, 1995). However, longitudinal studies suggest that friendships with antisocial peers during primary school years, do not increase the likelihood of engaging in antisocial behaviour in those who are not already antisocial themselves (Tremblay et al, 1995). A different picture emerges in those who develop antisocial behaviour in adolescence. In this instance the influence of antisocial peers seems to be a much stronger predictor of the development of antisocial behaviour. Fergusson et al (1996) found that adolescents, who did not display behaviour problems as children, developed antisocial behaviour following socialisation with antisocial peers during adolescence. As mentioned earlier, is appears that the main reason lax parental supervision is associated with the development of antisocial behaviour in adolescence is that it allows adolescents to spend more time with antisocial peers.

1.3.4.7 Socioeconomic Status

The final factor thought to contribute to the transformation of antisocial propensity, into antisocial behaviour, is socioeconomic status. Population based studies (e.g. Lahey, Miller, Gordon & Riley, in press) have shown that antisocial behaviour increases as family income reduces. It is hypothesised, however, that this correlation reflects a number of causal factors such as living in a neighbourhood with high crime rates, socialising with antisocial peers, lower parental occupational success and lower parental monitoring. Graham & Rutter (1973) and Richman, Stevenson & Graham (1975) found no relation between socioeconomic status, as measured by paternal occupation,and childhood behaviour problems. However, they speculate that associated social factors are likely to impinge of behaviour problems, factors such as type of housing and levels of overcrowding.

1.3.5 Summary

A number of individual factors have been found to be associated with childhood behaviour problems (e.g. maternal depression, child temperament, housing conditions etc.). Recently, research has moved beyond the investigation of individual risk factors and more comprehensive models of the development of behaviour problems have emerged to explain specific types of behaviour problems (e.g. conduct disorder, oppositional behaviour and antisocial behaviour). Developmental theories (e.g. Loeber, 1988) argue that there are different developmental pathways to the development of behavioural problems, which require differing causal explanations. Individual difference or propensity theories (e.g. Farrington;1990), in contrast, argue that early behaviour problems can be explained by stable individual differences or propensities towards the development of antisocial behaviour. Lahey et al (1999) have recently combined these two main theoretical viewpoints to create the integrative causal model of antisocial behaviour. The model suggests that cognitive ability and temperamental characteristics render young children vulnerable to the development of antisocial behaviour by creating an antisocial propensity. This propensity is mediated by social factors including parental behaviours, peer behaviour and socioeconomic status, resulting in antisocial behaviour. The model is said to account for the development and maintenance of antisocial behaviour in males only and an alternative explanation may be necessary for antisocial behaviour in females. Specific predictions made by the model are: that the factors implicated are predicted to have at least an additive effect, that oppositional temperament is the predisposing factor which contributes most strongly to the development of antisocial behaviour, and in this age

group, that harsh discipline and low tolerance for difficult behaviour contribute more to the development of antisocial behaviour than parental antisocial behaviour and lax supervision.

1.4 Methodological Issues

1.4.1 Normative Versus Problem Behaviours

There is much discussion in the literature about the nature of problem behaviour in preschoolers and the difficulties this poses for research in this area. The preschool years are a time of large scale and fast developmental changes and that many of the problems evident in the preschool years (e.g. tantrums, defiance, inattentiveness and aggression) are to some extent normative, a reflection of the developmental changes and pressures evident in the early years (Campbell et al ,1984, Richman & Landsdown, 1988 and Earls, Beardslee & Garrison, 1987). Bearing such observations in mind there is debate about whether researchers are simply measuring developmentally appropriate, and therefore transitory problems. Crowther, Bond & Rolf (1981) observe that between the ages of three and five years tantrums, overactivity, attentional problems and fighting with peers seem to decrease in non clinical samples. Thus research in this area, with a community rather than clinical sample, could be measuring developmentally appropriate and transient problems rather than lasting ones, unless a longitudinal approach is adopted.

Campbell (1995) comments that prevalence studies may not give a true reflection of disordered behaviour because the measures used in such studies (usually checklist or screening tools) are not commonly based on diagnostic criteria. Some young children will in fact meet diagnostic criteria for a recognised disorder (although they are seldom diagnosed in the preschool years) but without guidance on developmentally appropriate manifestations of disorders it remains difficult to differentiate normative behaviour from symptoms of disorder, and the problems posed for research in this area remain.

1.4.2 Issues of Comorbidity

Egeland et al (1990) posit that it is difficult to define categories of behaviour problems as there is so much overlap of diagnostic categories. Reeves, Werry, Elkind and Zametkin found support for this argument with their 1987 research into disruptive behaviour disorders in young children. They found that only 48% of their sample of 103 children were given just one diagnosis. Robins (1981) suggests that hyperactivity and conduct disorder are the

most common disorders of childhood. It is thought that there is at least a 50% overlap between these two disorders (Szatmari, Boyle & Offord, 1989)

1.4.3 Validity of Parental Reports

Also in the literature is doubt about the validity of parental reports of their childs temperament and behaviour and their own parenting behaviour. Jenkins et al (1980) recognise that the situation is a complex one and recognise that any behaviour represents an interaction between the child and those around him or her. In conducting their research into behaviour problems in preschoolers they were mindful that parental data may reflect parental anxiety rather than a problem within the child. Patterson, Reid & Dishion (1992) argue that parental reports are not likely to be accurate because of social desirability factors, rather than anxiety necessarily.

Sanson et al (1991), however, argue that there is growing evidence that maternal reports of both child temperament and child behaviour are valid. Parental reports of temperament and behaviour were compared with those of reports of Maternal and Child Health Nurses in the childs preschool years, and teachers once the children were school age. Reports were found to correlate well in a sample of difficult children (hyperactive, aggressive, or both). Observations of childrens behaviour in the home, laboratory and classroom support the validity of parental ratings of behaviour according to Campbell et al (1994) and Schaughency & Fagot (1993) argue that parental reports are especially accurate for children described as 'hard to manage'.

With regard to parental reports of their own parenting behaviour, research suggests that validity varies according to the time frame the parents are being asked to recall and the aspect of parenting they are being asked to report on (Dishion & McMahon (1998). More accurate results are obtained if parents are asked to recall particular parenting behaviours (e.g. supervision) over a specific time frame (e.g. 24 hours). Shelton, Frick, & Wootton (1996) found no evidence of social desirability in parental report of their parenting behaviour and Dishion, Li, Spracke, Brown & Haas (cited in Dishion & McMahon, 1998) found that parental reports of their own parenting are highly predictive of later behaviour problems, compared to observer reports of parental behaviour.

1.4.4 Summary

Research with preschool children is dogged by a number of methodological problems. Firstly, difficulties differentiating transient from lasting problems. Secondly, problems with overlap between diagnosable conditions. Thirdly, problems ensuring the accuracy of parental reports. The problems with definitions and diagnosis are ongoing and research continues to rely on the use of checklists of behaviours and cut off points for the diagnosis of problematic behaviour. However, researchers and clinicians are beginning to look at the importance of parental reports of the impact of the behaviour on child and family functioning as a means of differentiating between problematic and no problematic behaviours (e.g. Stallard, 1993 and Goodman, 1999). From the research to date it appears that parental reports of their and their childs behaviour are suitably valid. The validity of parenting behaviour can be enhanced by specifying behaviours to report on and referring to specific and recent time frames.

1.5 Aims of the Present Study

Preschool behaviour problems have been associated with a number of individual risk factors. More comprehensive theories have been developed to account for diagnosable conditions such as: conduct disorder, oppositional defiant disorder and antisocial behaviour. The integrative causal model of antisocial behaviour is one such model which is argued to account for the development of antisocial behaviour in male children and adolescents. The current study proposes to apply this model to the behaviour of male pre-school children in an attempt to further understand the origins and maintenance of early, problematic behaviours and develop more comprehensive theories of such. Preschool behaviour problems may be the precursors to lasting, diagnosable conditions and increased understanding of them may allow the development of early intervention strategies.

1.5.1 Research Questions

The research aims to answer the following questions using a cross sectional design, with a community sample:

1. Can the Integrative Causal Model of Antisocial Behaviour account for behaviour problems in pre-school children?

2. Which factors outlined in the model are involved in the development of behaviour problems in pre-school children?

3. Are any factors comparatively more influential in the development of behaviour problems in pre-school children?

1.5.2 Hypotheses

1. Predisposing factors (child variables) and social factors (parent variables and socioeconomic status) together, will be more predictive of child behaviour than each set of variables alone.

2. Oppositional temperament will be more predictive of child behaviour than the other predisposing factors of callousness, harm avoidance and verbal ability (comprehension and expression).

3. Parental discipline and threshold for tolerating difficult behaviour will be more predictive of child behaviour, in this age group, than parental antisocial behaviour and supervision.

2.0 METHOD

2.1 Participants

Forty parents and their three year old male children participated in the research. All lived in the Aylesbury Vale area.

2.2 Design

The study was a cross-sectional, within group design, with a community sample. The dependent variable was the child's current behaviour. The independent variables were: the child's verbal ability and temperament style; the degree of parental supervision and discipline, the degree of parental stress, psychological well being and antisocial behaviour; and the families socioeconomic status.

2.3 Measures

A number of standardised measures were used. Each one is detailed below. In addition parent and child ages were obtained to allow basic description of the population characteristics.

2.3.1 Child Behaviour

2.3.1.2 Strengths & Difficulties Questionnaire (Goodman, 1997). This is a 25 item behavioural screening questionnaire for use with children and young people aged 3-16 years. It gives a total difficulties score (0- 40) as well as scores on five sub scales regarding: conduct problems; emotional symptoms; inattention-hyperactivity; peer problems and prosocial behaviour. The questionnaire has been shown to have good test- retest reliability, 0.85, (Goodman, 1999), concurrent validity, 0.87, predictive validity, 0.85 and discriminant validity, 0.95 (Goodman & Scott, 1999). See Appendix 1 for a copy of the measure.

2.3.2 Verbal Ability

2.3.2.1 Reynell Developmental Language Scales - Second revision (Reynell, 1987). These scales measure verbal comprehension and expressive language in children aged 1-7 years. The scales are shown to have good reliability - expression , 0.91, and comprehension, 0.85, concurrent validity, 0.66, and predictive validity, 0.47 to 0.71 (Reynell, 1987).

2.3.3 Child Temperament

2.3.3.1 The Behavioural Style Questionnaire (Mc Devitt & Carey, 1978). This measures temperament in children aged 3-7 years. The 100 item questionnaire covers nine variables: activity, rhythmicity; approach - withdrawal; adaptability; intensity; mood; persistence; distractibility and sensory threshold. These nine variables combine to form three distinct clusters of traits: difficult, easy and slow to warm up. Test-retest reliability for the full measure is good (0.89). For the nine categories test-retest reliabilities range from 0.67 to 0.94 and internal consistencies range from 0.47 - 0.84 (McDevitt & Carey, 1977).

Fifty six items from the original questionnaire were employed as a short measure of oppositionality (arrhythmic bodily functions, low in initial approach, low adaptability, intense and predominantly negative in mood). Possible scores range from 0-30. Test -retest reliabilities for these items range from 0.75 to 0.94, while internal consistencies range from 0.45 - 0.80 (McDevitt & Carey, 1977). See Appendix 2 for a copy of the short form of the measure.

2.3.3.2 Preschool Behaviour Questionnaire (Behar & Stringfield, 19974). This is a 30 item screening instrument for identifying behaviour problems in preschool children. The measure provides a total problems score ranging from 0 to 60, as well as scores on three factors: hostile-aggressive; anxious-fearful; and hyperactive-distractable. The measure was found to have good criterion validity and reliability (average overall test-retest 0.84), while the average test-retest reliabilities for the three factors were 0.81, 0.71 and 0.67 respectively.

Three items were selected from the anxious- fearful factor to measure the temperament dimension know as harm avoidant (cautious, apprehensive and inhibited). These three items alone have an internal consistency of 0.72 and test-retest reliability of 0.63 (Tremblay et al, 1994). See Appendix 3 (questions 11 - 13) for a copy of the short form of the measure.

2.3.3.3 Prosocial Behaviour Questionnaire (Weir & Duveen, 1981). This is a 20 item questionnaire designed to measure the positive aspects of children's behaviour in primary school children. The measure provides a total problem score ranging from 0 to 40, with high scores suggesting more prosocial behaviour. Internal consistency for the measure is 0.94 and test-retest reliability is 0.91 (Weir & Duveen, 1981).

10 items were selected from the original measure to measure the temperament style known as callousness or low reward dependence (little empathy for others, preference for being alone and very little concern about winning the approval of others). These items alone have an internal consistency of 0.91 and test-retest reliability of 0.70 when used with preschool children (Tremblay et al, 1994). See Appendix 3 (questions 1 - 10) for a copy of the short form of the measure.

2.3.4 Parenting Behaviours

2.3.4.1 Parent Practices Interview (Webster-Stratton & Reid, personal communication). This measure focuses on seven parental behaviours: harsh discipline, harsh discipline for age, inconsistent discipline, appropriate discipline, positive parenting, clear expectations and degree of monitoring/supervision. Internal consistency scores range from 0.62 to 0.82.

The harsh discipline (14 items) and the supervision/monitoring (9 items)sub scales were employed. Internal consistency for these sub scales are 0.75 and 0.64 respectively Webster-Stratton & Reid, personal communication). Possible scores range from 0 to 7, with high scores suggesting harsh discipline and high levels of supervision/monitoring respectively. See Appendix 4 for a copy of the full measure.

2.3.5 Parental Tolerance

2.3.5.1 The Perceived Stress Scale - 14 (Cohen, Kamarck & Mermelstein, 1989). This measures the extent to which situations in one's life are appraised as stressful. Scores range from 0 to 56, with higher scores indicating more perceived stress. It has been shown to have good test-retest reliability, 0.55 - 0.85, concurrent validity, 0.17 - 0.49 and predictive validity, 0.52 - 0.76 (Cohen et al, 1989). See Appendix 5 for a copy of the measure

2.3.5.2 The General Health Questionnaire -12 (Goldberg & Williams, 1988). This is a widely used measure of psychological distress (of a non psychotic nature). Total scores range from 0 (indicating best mental health) to 36 (indicating worst mental health). The GHQ-12 has been shown to have good reliability, 0.92 and concurrent validity, 0.73 (McCabe, Thomas, Brazier & Coleman, 1996). See Appendix 6 for a copy of the measure.

2.3.6 Parental Antisocial Behaviour

2.3.6.1 The Antisocial Personality Questionnaire (Blackburn & Fawcett, 1996). This is a self report inventory which measures a range of intrapersonal and interpersonal dispositions relevant to offending behaviour. It gives scores for eight primary traits (self control, self esteem, avoidance, paranoid suspicion, resentment, aggression, deviance and extraversion) and two higher order factors (impulsivity and withdrawal). At present normative data and descriptions of the psychometric properties of the measure are based on male and female offenders and non offending males. The scales have been shown to have satisfactory reliability, 0.80, (non offenders) and validity, as measured by: the ability to differentiate between offenders and non offenders and within the offender sample, correlations with other measures of personality disorder and observer ratings of antisocial behaviours (Blackburn & Fawcett, 1996).

The aggression sub scale was used as a measure of parental antisocial behaviour. Items in this sub scale are said to relate to anger arousal, impatience or loss of temper and assaultative behaviour. Scores can range from 0-20. High scores suggest a tendency towards being easily angered and reacting with verbal, and sometimes physical, aggression. Low scores suggest a tendency towards calmness and restraint in the face of provocation. The aggression sub scale had good reliability, 0.77, and reasonable concurrent validity, 0.57 (Blackburn & Fawcett, 1999). See Appendix 7 for a copy of the full measure.

2.3.7 Socioeconomic Status

2.3.7.1 Jarman Indices (Jarman, 1983) for the Aylesbury Vale area were employed as an indicator of socioeconomic status and related social factors such as levels of overcrowding in participants communities. The Jarman index ranks electoral wards in order of deprivation (using a range of standard census details). An area with a larger score is more deprived that one with a smaller value. Indices in the Aylesbury Vale area range from -25.58 to 27.31. See Appendix 8 for a copy of the Jarman Indices for the Aylesbury Vale area.

2.4 Procedure

2.4.1 Pilot Study

The questionnaires were piloted on five friends, family and colleagues with children prior to the research proper. The pilot study aimed to: deduce the time it took to complete the

questionnaires; to identify any ambiguous or offensive questions and obtain general feedback about the procedure. Minor changes to the presentation of the questionnaires were made following the pilot.

2.4.2 Research Proper

GP's in the Aylesbury Vale area were asked to make contact if they would rather that patients registered at their practice were not approached regarding the research (see Appendix 9). The head of the Health Visiting Service was contacted to discuss the possibility of Health Visitors distributing opt-in slips to possible participants during children's developmental checks. Permission was given to use this recruitment method. A presentation was made to the Health Visitors about the research at their monthly meeting. Opt-in slips and reply paid envelopes were then distributed to each Health Visitor for distribution to possible participants. The distribution of opt-in slips by Health Visitors was monitored by telephone calls to each practice during the recruitment phase of the research. Continued involvement with recruitment was also sought via a later monthly meeting.

Health Visitor's outlined the research to possible participants and gave them an information sheet, opt-in slip and reply paid envelope (see Appendix 10). Those who opted-in were sent a more detailed information sheet about the research (see Appendix 11) and were contacted by telephone approximately one week later to see if they were still interested in participating, and to arrange a home visit. At the home visit the research was outlined in more detail and willingness for continued involvement was assessed. Parents were invited to ask any questions they had prior to completing the consent form (see Appendix 12). Parents were then advised how to complete the questionnaire pack and asked to proceed. Time was taken to engage the child before completing the language assessment. Once both procedures were complete the questionnaires were checked for omissions and parents were encouraged to ask any further questions about the research and/or offer any general comments. Participants were then thanked for taking part.

2.5 Ethical Approval

Ethical approval was received from the local research ethics committee (see Appendix 13 for confirmation).

3.0 RESULTS

3.1 Participant Characteristics

Forty parent-child dyads participated in the research, 38 parents were female and two were male. The mean age of the parents was 33 years (SD = 6.42, range = 22 years - 57 years). The mean age of the children was three years three months (SD = 1.86, range = 3 years - 3 years 9 months). An unpublished epidemiological study conducted in the locality found that there were approximately 2000 children turning three during 1998. The data is yet to be analysed and as such prevalence rates for behaviour problems in this sample are not available, however, the epidemiological study suggests that approximately 1300 children would have turned three during the data collection phase of this study and thus a large number of male children could potentially have been approached to participate in the study.

3.2 Child Behaviour

The mean behaviour problem score, on the Strengths and Difficulties Questionnaire was 10 (SD = 4.85, range 1- 25). Possible scores range from 0 - 40, with higher scores suggesting more problematic behaviour. Thirty five (87.5%) of the children fell into the 'normal' category (scores from 0 -15), four (10%) of the children fell into the 'borderline' category (scores from 16-19) and one child (2.5%) fell into the 'abnormal' category (scores of 20 plus). While there is no directly comparable data available for this age group, the mean score of a community sample of 71 male and female children aged 4-7 attending a dental practice was 8.6. The mean score of a similar population of 61 children attending a child psychiatry clinic was 19.5 (Goodman & Scott, 1999).

3.3 Predisposing Factors

3.3.1 Verbal Ability

The mean verbal comprehension scores, on the Reynell Language Development Test, for the sample was 44.95 (SD = 10.31, range 15-63), age equivalent 3 years 5 months. The mean verbal expression score, using the same measure, was 41.28 (SD = 9.38, range 3 - 57), age equivalent 3 years 3 months. Possible scores range from 0- 67 on both scales.

3.3.2 Temperament

Summary statistics for each temperament score are outlined in Table 1.

The mean oppositionality score, on the adapted Behavioural Style Questionnaire, was 19.33 (SD = 1.79, range 16 - 24). Possible score range from 0 - 30, with higher scores suggesting more oppositional behaviour. While there is no directly comparable data available for this age group, Mc Devitt & Carey (1978) observed a mean score of 16.12 in a sample of 250 male and female 3-7 year olds attending a GP practice.

The mean harm avoidant score, on the adapted Preschool Behaviour Questionnaire, was 4.05 (SD = 1.26, range 0 - 7). Possible scores range from 0 - 9, with high scores suggesting greater harm avoidance. While there is no directly comparable data available for this age group, Behar & Stringfield (1974) observed a mean score of 2.16 in a sample of 582 male and female children aged 3- 6 years attending preschool.

The mean callousness score, on the adapted Prosocial Behaviour Questionnaire, was 19.48 (SD = 5.04, range 10 - 30). Possible scores range from 0 - 30, with higher scores suggesting less callousness. While there is no directly comparable data available for this age group, Weir & Duveen (1980) observed a mean score of 11.21 in a sample of 365 unselected school children with a mean age of 7 years 4 months.

Table 1: Descriptive statistics for the temperament measures

Temperament Characteristic	Mean Score	SD	Range
Oppositionality	19.33	1.79	16 - 24
Callousness	19.48	5.03	10 - 30
Harm Avoidance	4.05	1.27	0 - 7

3.4 Social Factors

3.4.1 Parenting Behaviour

The mean harshness of discipline score was 2.66 (SD = 0.76, range 1.64 - 5.21), Possible scores range from 0 - 7, with high scores suggesting harsher parental discipline. The mean laxness of supervision score was 6.04 (SD = 0.52, range 4.66 - 7.00). Possible scores range from 0 - 7, with higher scores suggesting higher levels of monitoring. While there is no directly comparable data available for an unselected community sample, Webster-Stratton

& Reid (In press) observed a mean harshness score score of 2.5 and a mean laxness score of 5.9, in a sample of 426 parents of 3-8 year old children enrolled on an early intervention programme, aimed at reducing the risk of developing conduct disorder.

3.4.2 Parental Tolerance

The mean perceived stress score, on the Perceived Stress Scale, was 20.70 (SD= 6.82, range 7 - 40). Possible scores range from 0 - 56, with high scores suggesting greater perceived stress. Cohen & Williamson (1988) observed a mean score of 19.62 in an unselected community sample of male and female adults interviewed by telephone. The mean psychological well being score, on the GHQ-12, was 10.98 (SD = 6.31, range 4 - 26). Possible scores range from 0 - 36, with higher scores suggesting poorer psychological well being. Milne (1987) observed a mean score of 21.1 in a sample of male and female adults attending a clinical psychology clinic and McCabe (1996) observed a mean score of 12.0 in a sample of 1894 male and female adults 16- 64 years old, randomly selected from a GP practice register.

3.4.3 Parental Antisocial Behaviour

The mean parental aggression score, using the aggression scale of the Antisocial Behaviour Questionnaire, was 6.98 (SD = 4.23, range 0 - 17). Possible scores range from 0 - 20, with high scores suggesting increased levels of aggression. There is no data on female non offenders to date. The mean aggression score for male non offenders, with a mean age of 31.63, is 9.33 (Blackburn & Fawcett, 1999)

3.4.4 Socioeconomic Status

The mean Jarman Index score for the sample was - 4.64 (SD = 15.80, range -25.58 - 27.31). Possible scores for the area range from -25.58 - 27.31, with higher (positive) scores suggesting higher levels of deprivation.

3.5 Hypothesis 1

Hypothesis 1 was that predisposing factors (verbal comprehension, verbal expression, oppositionality, callousness and harm avoidance) and social factors (harsh discipline, lax supervision, parental stress, parental psychological well being, parental antisocial behaviour and socioeconomic status) combined, would be more predictive of child behaviour than either predisposing factors or social factors alone. This hypothesis was

analysed by conducting regression analyses for predisposing factors, social factors and predisposing and social factors combined. In each case child behaviour was the dependent variable. The proportion of variance accounted for by each regression model was then compared.

3.5.1 Predisposing Factors and Social Factors Alone

Summary statistics for the regression analyses for predisposing and social factors are presented in Table 2. The results show that predisposing factors were found to be significantly related to child behaviour ($F = 2.60$; $p < 0.05$) while social factors were not. Predisposing factors were observed to account for a slightly larger proportion of variance in child behaviour than social factors (7% and 4% respectively), however this difference is minimal and unlikely to be of interest. Using either model a large proportion of the variance in child behaviour remains unaccounted for.

Table 2: Summary statistics for predisposing and social factors regression analyses

Predictor Variables	Adjusted R squared	(%)	df	F	Sig Level
Predisposing factors (n=5)	0.17	7	5, 34	2.60	0.04 *
Social Factors (n=6)	0.14	4	6, 33	2.07	0.08

* $p < 0.05$

3.5.2 Predisposing Factors and Social Factors Combined

Next a multiple regression analysis was conducted combining predisposing factors and social factors and retaining child behaviour as the dependent variable. This analysis revealed a significant relationship between the combined predictor variables and child behaviour ($F = 2.37$; $p < 0.05$). Using this regression model 28% of the variance in child behaviour can be accounted for (Adjusted r squared = 0.28, df = 11, 28). While this is slightly more than the variance accounted for by either predisposing factors or social factors alone (7% and 4% respectively), an increase in the proportion of variance in the dependent variable accounted for by the predictor variable would be expected when the number of predictor variables is increased, also 72% of the variance remains unaccounted for. In addition, given the high number of predictor variables per participant these results are likely to be unreliable.

To compensate for these potential problems an alternative multiple regression was calculated. This regression analysis combined all predictor variables, and retained child behaviour as the dependent variable, as before, but used the step wise method of analysis. This analysis revealed a significant relationship between three predictor variables (socioeconomic status, harm avoidant temperament and parental antisocial behaviour) and child behaviour ($F = 2.37$; $p < 0.05$). These three predictor variables combined were found to account for 29% of the variance in child behaviour (Adjusted r squared = 0.29, df = 3, 36). Again, this leaves 71% of the variance in child behaviour unaccounted for.

Taken together these results lend some support to hypothesis 1. The predisposing and social variables combined account for a greater proportion of the variance in child behaviour than either predisposing or social factors alone. More specifically, three predictor variables (socioeconomic status, harm avoidant temperament and parental antisocial behaviour) combined were found to be significant predictors of child behaviour. However, a large proportion of the variance in child behaviour was not accounted for by the predictor variables examined.

The data used in each multiple regression was analysed to ensure that the assumptions underlying the use of regression analysis were upheld. The unstandardised predicted values and unstandardised residuals were plotted against one another to check the variance in the data and Kolmogorov Smirnoff goodness of fit tests were performed on the unstandardised residuals to test the distributions. The results suggested there was no reason to doubt the equality of variance or the normality of the distributions.

3.6 Hypothesis 2

Hypothesis 2 was that oppositional temperament would be more predictive of child behaviour than the other predisposing factors (verbal comprehension, verbal expression, callousness and harm avoidance). This hypothesis was analysed by conducting regression analyses for each predisposing factor, with child behaviour as the dependent variable. Table 3 shows the results of these analyses. The proportion of variance accounted for by each predisposing factor was then compared.

Table 3: Summary statistics for the predisposing factor regression analyses

Predictor Variables	R squared	(%)	df	F	Sig Level
Verbal Comprehension	0.04	4	1, 38	1.50	0.23
Verbal Expression	0.01	1	1, 38	0.34	0.57
Oppositionality	0.07	7	1, 38	2.76	0.11
Callousness	0.11	11	1, 38	4.59	0.04 *
Harm Avoidance	0.10	10	1, 38	4.19	0.05*

* $p < 0.05$

The results show that callousness and harm avoidance were found to be significantly related to child behaviour ($F = 4.59$; $p < 0.05$ and $F = 4.19$; $p < 0.05$) while the remaining predictor variables, including oppositionality, were not. Callousness was the most significant predictor of child behaviour (10.8%), followed by harm avoidance (9.9%) and oppositionality (6.8%).

Taken together these results do not lend support to hypothesis 2, oppositionality does not account for more of the variance in child behaviour than either of the other predisposing factors.

As before the data used in each multiple regression was analysed to ensure that the assumptions underlying the use of regression analysis were upheld. The unstandardised predicted values and unstandardised residuals were plotted against one another to check the variance in the data and Kolmogorov Smirnoff goodness of fit tests were performed on the unstandardised residuals to test the distributions. The results suggested there was no reason to doubt the equality of variance or the normality of the distributions.

3.7 Hypothesis 3

Hypothesis 3 was that harsh parental discipline and low parental tolerance for difficult behaviour (ie stress and poor psychological well being) would be more predictive of child behaviour than parental antisocial behaviour (aggression)and lax parental supervision. This hypothesis was analysed by conducting regression analyses for each predictor variable (harsh discipline, low tolerance, parental antisocial behaviour and lax parental

supervision), with child behaviour as the dependent variable. The proportion of variance accounted for by each model was then compared.

Summary statistics for the regression analyses for each parental predictor variable are presented in Table 4. The results show that harsh discipline was the only parenting predictor variable found to be significantly related to child behaviour ($F = 3.96$; $p < 0.05$). Harsh discipline was the most significant predictor of child behaviour (9%), followed by parental antisocial behaviour (5%), low tolerance of difficult behaviour (3%)and lax supervision which accounted for none of the variance (0%).

Table 4: Summary statistics for the parental predictor variables regression analyses

Predictor Variables	R squared	(%)	df	F	Sig Level
Harsh discipline	0.09	9	1, 38	3.96	0.05*
Low tolerance (GHQ & PSS)	0.03	3	2, 37	0.56	0.57
Antisocial behaviour	0.05	5	1, 38	1.98	0.17
Lax supervision	0.00	0	1, 38	0.06	0.80

* $p<0.05$

GHQ = The General Health Questionnaire 12
PSS = The Perceived Stress Scale 14

Taken together these results suggest there is partial support for hypothesis 3. Harsh discipline and low tolerance of difficult behaviour did not account for a greater proportion of the variance in child behaviour, compared to antisocial behaviour and lax supervision. However, harsh discipline did emerge as the most significant predictor of child behaviour and lax supervision as the least. Again, a large proportion of the variance remains unaccounted for.

As before the data used in each multiple regression was analysed to ensure that the assumptions underlying the use of regression analysis were upheld. The same process was applied and there was no reason to doubt the equality of variance or the normality of the distributions.

4.0 DISCUSSION

4.1 Overview

This section of the dissertation is concerned with the interpretation of the results in light of both previous findings and limitations of the current study. It begins with a summary of the findings in terms of participant characteristics and the hypotheses under investigation. A discussion of the methodological constraints follows, along with an interpretation of the findings in relation to both theory and clinical practice. The section ends with recommendations for future research and the overall conclusions from the study.

4.2 Summary of Findings

A number of factors have been found to be associated with preschool behaviour problems but as yet no comprehensive theory of their development has been proposed. The present study aimed to apply the Integrative Causal Model of Antisocial Behaviour (Lahey et al, 1999) to the behaviour of preschool children. More specifically, the study aimed to examine: whether the model could account for behaviour problems in preschool children; which factors outlined in the model were involved in the development of behaviour problems and whether any factors were comparatively more influential in the development of behaviour problems in preschoolers.

4.2.1 Participant Characteristics

Forty parent-child dyads took part in the research. Ninety five percent of the parents were female. The study was limited to male children. The mean age of the parents was 33 years, while the mean age of the children was three years and three months. The majority (87.5%) of the children's behaviour fell into the 'normal' category, with the remainder being described as 'borderline' (10%) or abnormal' (2.5%). The proportion of the children with behaviour problems in this sample was lower than that observed in epidemiological studies of preschool behaviour (e.g. Richman et al, 1977, Sonuga-Barke et al, 1997), which may have been due to differences in sample size and/or in socio-demographic characteristics.

4.2.2 Investigation of Hypotheses

As predicted, predisposing factors and social factors combined accounted for more of the variance in child behaviour than either predisposing or social factors alone. This finding offers some support for the prediction made by Lahey et al (1999), that predisposing and

social factors have at least an additive affect. Further analysis, however, revealed that only three of the eleven predictor variables implicated in the model of Lahey et al (1999) emerged as significant predictors of child behaviour. These variables were: socioeconomic status; harm avoidant temperament and parental antisocial behaviour. While this combination of variables, in isolation, would not have been predicted to be significantly related to child behaviour by Lahey et al (1999), each has been found to be associated with either general behaviour problems and/or more specific antisocial behaviours by other researchers. Campbell et al (1991), for example, found that preschool children with behaviour problems were more likely to come from families from low socioeconomic status, when matched on all other variables. However, other studies do not support this finding, for example Richman et al (1975) found that socioeconomic status, as measured by paternal occupation, was not significantly associated with preschool behaviour problems, but argued that related social factors (e.g. type of housing, overcrowding etc) may be. With regard to harm avoidant temperament, Tremblay et al (1994) found that preschool children rated as high in harm avoidance were less likely to engage in antisocial behaviour when they reached puberty and adolescence, suggesting that harm avoidant temperament had some protective effect against the development of antisocial behaviour. Finally, parental antisocial behaviour has been observed to be significantly more common in youths with antisocial behaviour (e.g. Farrington, 1995), suggesting some transmission of antisocial behaviour via modelling and/or a genetic influence.

So, while the model of Lahey et al (1999) would not predict that socioeconomic status, harm avoidant temperament and parental antisocial behaviour would be significant predictors of childhood antisocial behaviour, it would predict the combined effect of predisposing and social factors that was observed by the present study. Perhaps of greater importance, and a cause of additional speculation, is the observation that a large proportion of the variance in child behaviour was not accounted for by the eleven predictor variables examined, regardless of combination. Thus suggesting that other variables are of influence which were not examined by the present study. As mentioned in the introduction other factors such as post natal depression, the quality of the parent child attachment, marital discord, and physical illness in child or parent for example have been shown to impact on child behaviour. It may be that alternative predisposing or social variables, such as those mentioned above, were of influence for this sample.

The prediction that oppositional temperament would be the greatest contributor to child behaviour, compared to other predisposing factors, was not upheld by the present study. Callousness and harm avoidant temperament were the only factors found to be significantly related to child behaviour. Again this prediction would not have been made by Lahey et al (1999) but the finding offers support for previous research linking callous and harm avoidant temperaments with problematic behaviours (e.g. Frick et al, 1994, Tremblay et al, 1994). The lack of observed association between behaviour problems and both oppositional temperament and verbal ability is intriguing. Oppositional temperament is assumed to drive the development of oppositional behaviours (Lahey et al ,1999), and a number of prospective, longitudinal studies have established this link (e.g. Moffitt et al, 1996). The lack of relation between verbal ability and behaviour problems is less surprising as there is an ongoing debate in the literature (see Lynham et al, 1993, Keenan & Shaw, 1997 and Moffitt, 1993) about whether it is poor verbal ability, low intelligence or some other neuropsychological deficit that is the precursor to the development of problematic behaviour. It is possible that extreme degrees of oppositional behaviour are the precursors to the development of antisocial behaviour and that the oppositionality scores observed in this sample were less extreme, and as such, did not reach significance.

The prediction that harsh discipline and low parental tolerance would be more predictive of behaviour problems than lax supervision and parental antisocial behaviour was partially supported. Harsh discipline was the only parent variable significantly related to child behaviour and lax supervision accounted for the least variance in child behaviour compared to the other parent variables measured. There is an established literature regarding the link between harsh discipline and the development of behaviour problems, including antisocial behaviours (e.g. Farrington, 1995, Lahey et al, 1998) for which the present study offers support. In addition, previous research has not observed a link between problematic behaviour in young children and lax parental supervision. In this age group, lax supervision has been associated more with accidents and injuries than problematic behaviour (e.g. Dishion & McMahon, 1998). Again support for these findings is obtained via the present study.

The remaining findings of the current study are comparatively more problematic when compared with existing research findings. In the literature, there is an established link between parental stress and poor mental well being and the existence of childhood

behaviour problems (e.g. Rutter, 1982, Cox, 1988). The effect of stress and ill health on parental tolerance of difficult behaviour is also well documented (e.g. Patterson, 1982). The present study, however, failed to establish such a link. It is possible, that the parents who participated in the research, by virtue of opting in, were interested in childhood behaviour and perhaps had increased insight into developmentally appropriate preschool behaviour. While completing the questionnaires many parents commented on how, while their child's behaviour was problematic, it was to be expected in children of their age, that is they seemed to report problematic and unwanted behaviours, but see them as developmentally appropriate. In addition, as mentioned in the results section, the parents in this sample had lower perceived stress scores and general psychological distress scores compared to similar samples in published studies. Thus it is also possible that the parents in this sample may not only have had the insight into developmentally appropriate behaviour but the resources to tolerate it.

Parental antisocial behaviour, next to harsh discipline, accounted for more of the variance in child behaviour than lax supervision and low tolerance, although it was not observed to be a significant predictor. This observed trend corresponds with previous research findings in adolescents with antisocial behaviour (e.g. Farrington, 1995, Lahey et al, 1988). However, research seems not to have examined the relationship between parental antisocial behaviour and problematic behaviour in younger children and the tentative link observed by the present study warrants further investigation.

Overall, the hypotheses proposed received partial support, however, a large proportion of the variance in child behaviour remained unaccounted for by the predictor variables. Before the findings can be interpreted with regard to theory and clinical practice, there are a number of methodological constraints to consider.

4.3 Methodological Considerations

4.3.1 Sample

The sample was smaller than intended. It was hoped that fifty parent-child dyads could be recruited to the study to increase the likelihood of obtaining a range of responses, and as such, have greater confidence that conclusions drawn from this sample were applicable to a wider population. A considerable amount of time was taken to recruit this sample and time constraints meant that it was not possible to wait for the anticipated number to opt-in.

Statistical analyses suggested that there was no reason to doubt the normality of the distribution of the scores obtained from this sample, and as such, the results are thus likely to be applicable to a larger, similar population.

It may be that the recruitment method chosen was an unhelpful one and alternatives would have proven more fruitful. Telephone contact with the Health Visitors during the recruitment stage revealed that some were diligent in their discussion of the research with families and considerably proactive in recruitment, while some Health Visitors had not informed families of the research at all It was difficult to gain an understanding of the latter and thus to develop ways round the problem. It may have been that they were too busy or that the research was not a priority for them, despite having volunteered to be involved with the distribution process.

It is difficult to estimate the response rate for the study. Two hundred and fifty opt-in slips were supplied to Health Visitors for distribution. Some Health Visitors photocopied additional forms when their supply had depleted, some asked for additional forms and some failed to distribute any at all. Such variability makes it difficult to know just how many families were invited to participate and consequently impossible to calculate accurate response rates. Greater co-operation with recruitment may have been achieved if the research was discussed individually with each Health Visiting practice rather than presenting to the collective. Alternative recruitment methods, such as recruiting via GP practices or nurseries, may also have proven more fruitful.

Those Health Visitors who were diligent in their discussion of the research with families reported that families seemed exceedingly interested in the research and were consequently surprised to learn there were difficulties obtaining significant numbers. It may be that the information in the opt-in slip (see appendix 10) was off putting and more emphasis on the desire to understand typical preschool behaviour (and make inferences about problematic behaviour from such) may have made it more likely that parents would opt-in. The same is true for the tone of the second stage information sheet. None of those who had opted in opted out at the second stage so this may not have been an issue at that point, but may have prevented opting in at an earlier stage. Alternatively it may be that parents were genuinely interested in participating but were unable to find the time for such a commitment alongside the additional demands on their time.

The sample may have been unrepresentative with regard to their knowledge of child development and developmentally appropriate behaviour. All had access to an established primary preventive service operating in the locality. This venture consists of a series of services offered by Health Visitors and Clinical Psychologists to the parents of children under five years of age with behaviour problems. A significant proportion of this work involves the normalisation of developmentally appropriate behaviour in preschool children. This may have raised the knowledge base (and potentially tolerance) of the participants in this study and as such they may be not be comparable to other populations. It is difficult to know how many had accessed the service. It is possible that Health Visitors selected those who had used the service thinking that they would be interested in the research. It may have been helpful to collect this data to know whether the sample was biased in that respect.

While ethnicity was not specifically recorded in the present study, it was apparent that none of the participants were from ethnic minority groups. It could be that the use of questionnaires and a language test prevented families for whom English was not the first language from opting in. The applicability of the results to a broader ethnic population may thus be debatable.

4.3.2 Design

The cross sectional design limits the conclusions that can be drawn about the direction of causality. A longitudinal design, although clearly not possible given the constraints of this study, may have proven more informative. This would have allowed greater insight into the direction of causality and the dynamic interactions between predictor variables. In addition and perhaps more feasible is a between groups design, comparing a clinic sample with a community sample. This may have proven a more fruitful design that might have been able to clarify some of the more ambiguous observations made by this study. For example whether variables that are associated with minor behaviour problems are also associated with those severe enough to warrant intervention.

The study may have also been limited by the fact that the design relied heavily on parental reports of their own and their child's behaviour. There is debate in the literature about the reliability of parental reports. Some researchers have argued that parental reports are likely to be biased by social desirability (e.g. Patterson et al 1992), whereas others (e.g.

Sanson et al, 1991) argue that parental reports are an accurate measure of child behaviour. To enhance reliability parents were asked to comment on specific parenting behaviours, during a specified time frame, as recommended by previous research (Dishion & McMahon, 1998). However, without corresponding reports by non parents, or corresponding observational data, accuracy cannot not be assumed.

The study may also have been marred by its reliance on the use of a large number of questionnaires. The questionnaires were made into a booklet, split into two sections to allow a natural break. Prior to completion parents were alerted to the length of the booklet and encouraged to take a break, if they felt the need. Parents tended, however, to persevere with completion which took approximately an hour. It is possible that parental concentration and motivation waned and unreliable results were obtained. Without the use of test-retest procedures the reliability of the results obtained cannot be assumed.

Finally, it may have proven less ambitious and potentially more illuminating to apply a more specific model of problematic behaviour to this community sample. Doing so might have made it more feasible to gather data about predisposing and social factors and may have helped identify additional factors which may account for the variance unexplained in the current study child. During the process of completing the interview a number of parents mentioned factors such as: previous mental health problems; family discord; financial pressures and conflictual sibling relationships. These may also influence the behaviour of preschool children but are not considered influential by the more comprehensive theories, such as the integrative causal model, and were thus not inquired about systematically.. The addition of qualitative methods would be particularly useful here.

4.3.3 Measures

Closely linked to the point made above about parental attention and reliability, a similar point is made with regard to the language measure used. Although designed for use with this age group it took approximately an hour to complete. Again, while steps were taken to allow natural breaks from sustained attention, and to re-gain the child's attention during testing, it is possible that the results were affected by the child's ability to maintain attention and as such do not represent a 'pure' measure of verbal ability. While the test procedure specifies completion of all items in the test, at times it was necessary to move to the next section of the test to add novelty and re-gain the child's attention. It was possible in some

cases to return to the incomplete section and continue. However, on reflection a shorter (global rather than specific) language test may have been preferable.

Some of the child measures used were designed for use with older children which may have been problematic for the study. For example, the Prosocial Behaviour Questionnaire was designed to assess the behaviour of primary school aged children (but has been used to measure callous temperament e.g. Tremblay et al, 1994) by examining their interactions with other children. Parents of only children, who did not attend nursery/playgroup, found it difficult to answer these questions as they had not observed their child interacting with other children. It is possible then that some of the results reflect lack of opportunity to observe the skill rather than lack of skill per se. There were, however, no alternative temperament measures for this age group which measured the dimensions of interest.

Another potential problem for the study was the use of the Jarman Index as a measure of socioeconomic status. It was not designed as such but was chosen for inclusion in the study for two reasons. Firstly because it can be inferred from participant post codes, which were obtained when participants opted in, so it reduced the number of questions parents had to answer at the home visit. Secondly Jarman indices are thought to reflect a range of characteristics of the community they relate to. The model under examination proposed that while socioeconomic status was observed to be related to antisocial behaviour, it may have its influence via related features of the community (e.g. levels of overcrowding, crime rates etc), rather than income or occupation per se. The study may, however, have been enhanced by including a recognised, brief, measure of socioeconomic status. Concerns about the already high level of demands on parents prevented inclusion of such a measure in the present study. On reflection it may have been possible to request information regarding parental occupation (as a measure of socioeconomic status) at the opt-in stage.

The final potential difficulty with regard to the measures used was the use of the Antisocial Behaviour Questionnaire. This measure was designed for use with offender populations and requires respondents to answer simply 'yes' or 'no'. Some of the participants found it difficult to complete, either because of the need to answer 'yes' or 'no', when they would have preferred additional categories, or because they found the questions bizarre and potentially irrelevant to their lifestyles and experiences. In an attempt to avoid such

problems participants were alerted to the fact that the questionnaire required yes or no responses prior to completion and that some of the questions may not seem relevant to them. They were encouraged to: chose an answer based on their reactions the majority of the time; to clarify their responses with a note and to leave blank any questions which they thought were not applicable. In fact, despite comments to the contrary during completion, participants managed to complete the questionnaire fully.

4.4 Interpretation of the Findings

4.4.1 Theoretical Implications

4.4.1.1 Developmental Theories

Developmental theories suggest that problematic behaviour develops through a series of interactions between the child (with or without specific deficits or characteristics) and their social world (parents, peers and community). In addition, developmental theories argue that there are different trajectories for early and late onset and different types of problematic behaviours. For example Moffitt's theory (1993a, 1993b) suggests that early onset antisocial behaviour develops in children with deficits in neurological functioning (including language) which render children difficult to socialise. These early deficits lead to the development of rejecting peer relations and academic failure, ending in the development of an enduring antisocial personality structure. Patterson's (1982) coercive process theory suggests that problematic behaviour begins with a child with oppositional temperament and parents with deficits in the skills necessary to manage such a child. The child learns to exert control over parental behaviour through a series of interactions where oppositional behaviour and parental surrender are reinforced. Harsh discipline techniques are often adopted in exasperation.

It is difficult to interpret the findings of the present study in relation to developmental theories due to the cross sectional nature of the research design. However, it is possible to comment on the findings with regard to the variables implicated by these theories. Both theories argue that predisposing (child) factors interact with social factors to have a combined effect on the development of problematic behaviour, a prediction that was supported by the present study. The theories suggest that verbal ability and oppositional temperament are significant contributors to problematic behaviour, neither of which were observed by the present study. The theories also argue that these child variables are

transformed into problematic behaviour via rejection from peers, academic failure, the use of inconsistent management techniques and harsh discipline techniques. It was not possible to measure peer and educational influences in this age group and the consistency of management is difficult to measures using a cross sectional design, however, harsh discipline was measured and was observed to be a significant predictor of child behaviour. It appears that the current study offers some, but limited, support for the developmental theories described.

4.4.1.2 Individual Difference or Propensity Theories

Individual difference or propensity theories suggest that problematic behaviours arise out of lasting or temporary tendencies to behave antisocially (e.g. boredom, low intelligence, impulsivity and daring). These stable or transient propensities are transformed into antisocial behaviour following a cost-benefit analysis of anticipated or actual outcomes. The antisocial behaviour of others is argued to encourage the transformation of propensity to actuality, whereas anticipated punishment is thought to inhibit it (e.g. Gottfredson & Hirshi, 19990, Farrington, 1995).

Again it is difficult to examine whether the dynamic process thought to account for the development of antisocial behaviour occurs in preschool behaviour problems using a cross sectional design, However, as before, it is possible to comment on the findings of the current study with regard to some of the variables implicated by the theory. Harm avoidant temperament can be conceived of as the reverse of a tendency towards impulsivity and daring. This and parental antisocial behaviour were measured by the present study and were found to be significant predictors of child behaviour, in conjunction with socioeconomic status. It appears then, as with developmental theories, some, but limited support is offered to the individual difference or propensity theories by the current study.

4.4.1.3 The Integrative Causal Theory of Antisocial Behaviour

The integrative causal theory of antisocial behaviour combines developmental and individual difference theories to provide a comprehensive theory of antisocial behaviour. According to the theory individual differences in antisocial behaviour can be accounted for by individual differences in antisocial propensity. Antisocial propensity is the net result of specific temperament characteristics and cognitive ability. It is transformed into antisocial behaviour via multiple interactions with the child's' social world (parental, peer and

socioeconomic factors). Specific predictions made by the authors are threefold. Firstly, antisocial propensity, or predisposing factors, and social factors combine to culminate in antisocial behaviour. Secondly, oppositional temperament is the most influential predisposing factor. Thirdly, harsh discipline and low tolerance for difficult behaviour are the most influential of the social factors in the development of antisocial behaviour.

As the model is based on the integration of developmental and individual difference theories, it will come as no surprise that the present study offers some, but limited, support for the model. Again the cross sectional design of the present study makes it difficult to examine whether the dynamic process thought to account for the development of antisocial behaviour occurs in preschool behaviour problems. It is possible, however, to comment on the findings of the current study with regard to some of the variables implicated by the theory. The prediction that predisposing and social factors combined contribute more to the development of behaviour problems than either alone was supported by the present study. However, a specific combination of three of the eleven variables implicated by the model were observed to be significant predictors of child behaviour. These were socioeconomic status, harm avoidant temperament and parental antisocial behaviour. Oppositional temperament did not emerge as the most significant predisposing factor to contribute to child behaviour and harsh discipline stood alone as the most significant parent factor to contribute to child behaviour.

Overall, the results of the current study suggest that the theories described within the context of the present study may be of limited value as frameworks for understanding the behaviour of preschool children. A combination of three factors emerged as significant predictors of child behaviour in this sample, which would not be predicted by any of the theories and still failed to account for a large majority of the variance in child behaviour. However, those most predictive factors were a combination of predisposing and social factors, lending support for the theory that problematic behaviour is the product of a combination of variables rather than the consequence of individual risk factors. Whether this in an additive or interactive effect is still open to debate and would require an alternative research design to clarify the position. The theories under consideration were developed to account for the more extreme, diagnosable, problematic behaviours, and as such, it may not be surprising that they do not account for the general behaviour of preschool children or less extreme behaviour problems.

4.4.2 Clinical Implications

Given the large amount of variance unaccounted for by the predictor variables examined and only partial support for the hypotheses examined the clinical implications can only be tentative in nature at this point.

4.4.2.1 Assessment

The findings of the present study tentatively suggest that it may be helpful to gather information regarding particular predisposing and social factors, for example family socioeconomic status, child temperament, parental history of antisocial behaviour and discipline strategies, during the assessment process of those referred for therapy. These three factors combined account for approximately 30% of the variance in child behaviour. This may have a role in the development of behaviour problems. If future research finds that these factors are implicated in the development of behaviour problems it may be important for the combination to be included in the formulation of presenting problems. However, the current study findings also clearly suggest that additional factors, other than those measured here, may be influential in the development of behaviour problems in preschool children, as suggested by the large amount of unexplained variance. Conversations with parents during the visits suggest that factors such as parental history of mental health problems, relationship breakdown and conflictual sibling relationships influence the behaviour of their preschoolers. These additional factors could be investigated systematically in future studies.

4.4.2.2 Intervention

Again with the caveat that support for the hypotheses was only partial and a large amount of variance remaining unexplained, the findings of the present study may have implications for individual interventions for families referred for help regarding preschool behaviour problems. They may also have implications for interventions at a service provision level.

If future research supports a role for socioeconomic status, child temperament and parental antisocial behaviour and discipline strategies in the development of behaviour problems then individual interventions could focus on these factors. Psychoeducation could be undertaken with the family, tailored according to the assessment and formulation. This could focus on: the role of temperament on child behaviour, the role of modelling on child behaviour and the impact of particular discipline strategies on the maintenance of

behaviour problems. Specific interventions could focus on teaching parents more effective interaction and discipline strategies, bearing in mind the child's particular temperament style and developmental needs and abilities.

At the service provision level, a range of interventions may be useful. Preventive or early intervention strategies may be offered in the geographic areas with high deprivation/low socioeconomic status. A range of possible services might be offered in conjunction with the local Health Visiting service and other community groups. For example, information leaflets regarding preschool behaviour problems could be devised and made available for consumption in prominent places such as GP practices, nurseries etc. These may increase awareness and understanding of behaviour problems and could include information on the types of problem behaviour preschoolers typically exhibit, factors associated with their development and how and when to access the local support services available. This information could be backed up by a programme of talks (by those involved with the treatment of behaviour problems) for parents of preschoolers in the local community. These could cover the range of problems experienced by preschoolers, factors which contribute to the origins and maintenance of such and when and where to go for more help. Such talks could take place in GP practices, local community centres or school and nurseries.

Finally, drop-in clinics where parents of preschoolers with behaviour problems can get advice could be offered in communities where high deprivation levels are evident. Such a service is offered by Clinical Psychologists in the area in which the present study was conducted. Three drop in clinics, in three different locations, are run on a monthly basis. Evaluations of this service suggests that: the clinics are well attended; that families appreciate the ease of access (both in terms of there not being a waiting list and the geographic location) and that the need for Health Visitor input reduces significantly following attendance. The Child and Adolescent Health Psychology Service which staffs the service has also devised information leaflets for parents describing common behaviour problems seen in preschoolers which document the prevalence, contributory factors and basic behavioural management strategies to help overcome the problems. These are used as a supportive adjunct to the verbal advice given at drop-in clinics and families report that they find them useful, not just as a reminder of the advice given, but for sharing with others involved in the care of the child to achieve consistency in management.

Similar community-based intervention projects (e.g. Newpin - Pound & Mills, 1985; PIPPIN - Parr, 1995; Parent-Link - Kahn & Allen, 1996 and the Parent Adviser Service - Davis et al, 1997) have been developed and targeted towards those in greater need. Initial evaluations of these projects suggest considerable benefits to those who have accessed them (see Cox, 1993 for a review of the area).

4.5 Recommendations for Future Research

The results of the present study suggest that much further research is needed in order to better understand the behaviour of preschool children.

The research could be repeated making the necessary changes to the design, recruitment process and measures, to compensate for the methodological problems identified earlier. A larger, possibly more representative sample could be obtained, perhaps by adopting alternative recruitment strategies such as via GP practices, Health Visitor Clinics or nurseries/play groups. Clearly these alternative recruitment methods would require ethical approval, which may be more problematic for some recruitment methods than others. The reliability of parental reports could be ensured by employing shorter measures, where possible, to reduce the likelihood of problems sustaining attention and motivation. However, locating shorter measures with good psychometric properties proved problematic for the present study. Reliability of the measures used could be assessed by including test-re-test procedures for a sub sample or by the use of concurrent observational measures. Clearly these methods would lengthen the data collection process significantly and consent would also need to be obtained. This might be more problematic for observational measures.

Further research might usefully be conducted with a clinic, rather than community sample. Again, in the locality in which the study was conducted, data regarding presenting problem is routinely collected (at various stages of the treatment process) by the Child & Adolescent Health Psychology Service. It might be possible to expand the number of measures collected pre treatment to include measures of temperament and socioeconomic status in order to research factors which contribute to behaviour problems in the clinic population. Clearly this would require ethical approval from the local committee and consent from the families, but it might help shed much more detailed light on the applicability of models of antisocial behaviour to general behaviour problems in preschoolers.

Alternatively, it may be possible to attract funding for longitudinal research. This research could include factors not investigated in the present study that may account for more of the unexplained variance and could also investigate the direction of causality. Such a project could be a joint venture between Health Visitors and Clinical Psychology Services. Health Visitors are ideally placed to gather longitudinal data in a community sample as they complete a series of developmental checks throughout the preschool years.

A more feasible method, given the constraints of doctoral research, might be to a between groups study looking at factors associated with behaviour problems. Comparison of a clinic sample with a community sample might allow greater insight into whether the model is applicable to the two groups. It might be helpful to examine a less broad theory and to collect qualitative data about potential associated risk factors.

4.6 Conclusions

Overall, the present study demonstrated that the integrative causal model of antisocial behaviour may be of limited value as a framework for attempting to understand the behaviour of preschool children. Few of the factors implicated in the model were observed to be related to the behaviour of the preschool children and those that were did not account for a large proportion of the variance. Methodological problems may account for some of these unexpected findings. However, it may also be that different factors are implicated in the development of antisocial behaviour, compared to those implicated in the development of preschool behaviour problems. Alternatively it may be that less extreme behaviour was examined in this study and thus non significant relationships were observed. Future research could address some of the questions left unanswered by the present study.

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APPENDICES

Appendix 1: The Strengths & Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft!. Please give your answers on the basis of the child's behaviour over the last six months.

	Not True	Somewhat True	Certainly True
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐
Often argumentative with adults	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Can stop and thinks things over before acting	☐	☐	☐
Can be spiteful to others	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Do you have any other comments or concerns?

Appendix 2: The Behavioural Style Questionnaire

USING THE SCALE SHOWN BELOW, PLEASE MARK AN "X" IN THE SPACE THAT TELLS HOW OFTEN THE CHILD'S RECENT AND CURRENT BEHAVIOR HAS BEEN LIKE THE BEHAVIOR DESCRIBED BY EACH ITEM.

Almost never	Rarely	Usually does not	Usually does	Frequently	Almost always
1	2	3	4	5	6

The child is moody for more than a few minutes when corrected or disciplined.	almost never	1 2 3 4 5 6	almost always
The child can be coaxed out of a forbidden activity.	almost never	1 2 3 4 5 6	almost always
The child laughs or smiles while playing.	almost never	1 2 3 4 5 6	almost always
The child responds intensely to disapproval.	almost never	1 2 3 4 5 6	almost always
The child needs a period of adjustment to get used to changes in school or at home.	almost never	1 2 3 4 5 6	almost always
The child is slow to adjust to changes in household rules.	almost never	1 2 3 4 5 6	almost always
The child has bowel movements at about the same time each day.	almost never	1 2 3 4 5 6	almost always
The child is willing to try new things.	almost never	1 2 3 4 5 6	almost always
Changes in plans bother the child.	almost never	1 2 3 4 5 6	almost always
The child settles arguments with playmates within a few minutes.	almost never	1 2 3 4 5 6	almost always
The child shows strong reaction to things, both positive and negative.	almost never	1 2 3 4 5 6	almost always
The child had trouble leaving the mother the first three days when he/she entered school.	almost never	1 2 3 4 5 6	almost always
The child falls asleep as soon as he/she is put to bed.	almost never	1 2 3 4 5 6	almost always
The child likes to go to new places rather than familiar ones.	almost never	1 2 3 4 5 6	almost always
The child is annoyed at interrupting play to comply with a parental request.	almost never	1 2 3 4 5 6	almost always
The child eats about the same amount at supper from day to day.	almost never	1 2 3 4 5 6	almost always
The child complains when tired.	almost never	1 2 3 4 5 6	almost always
The child cries intensely when hurt.	almost never	1 2 3 4 5 6	almost always
The child reacts strongly to kidding or light-hearted comments.	almost never	1 2 3 4 5 6	almost always

Appendix 3: The Preschool Behaviour Questionnaire and Prosocial behaviour Questionnaires combined (short form)

Below is a list of statements about children's behaviour. Please read each statement and place a tick in the column which applies most to your child. If your child definitely shows the behaviour put a tick in the 'certainly applies' box. If your child shows the behaviour to a lesser degree, or less often, put a tick in the 'somewhat applies' box. If your child rarely or never shows the behaviour put a tick in the 'rarely applies'.

Please try to answer all questions. There is a space at the end for additional comments you may wish to make.

	Rarely applies	Applies somewhat	Certainly applies
Takes the opportunity to praise the work of other children	❑	❑	❑
Shows sympathy to someone who has made a mistake	❑	❑	❑
Helps other children who are feeling sick	❑	❑	❑
Will try to help someone who has been hurt	❑	❑	❑
Offers to help other children who are having difficulty with a task	❑	❑	❑
Volunteers to help clear up a mess someone else has made	❑	❑	❑
Will invite bystanders to join a game	❑	❑	❑
If there is a quarrel or dispute will try to stop it	❑	❑	❑
Spontaneously helps to pick up objects which another child had dropped	❑	❑	❑
Comforts a child who is crying or upset	❑	❑	❑
Is worried, worries about many things	❑	❑	❑
Tends to be fearful or afraid of new things or new situations	❑	❑	❑
Cries easily	❑	❑	❑

Additional Comments:

This section asks questions about different ways of disciplining children and teaching them right from wrong.

1. The following is a list of things that parents have told us they do when their children misbehave. In general, how often do you do each of the following things when your child misbehaves (that is, does something s/he is not supposed to do)?

	Never	Seldom	Sometimes	About half the time	Often	Very often	Always
a. Notice it but not do anything about it.	1	2	3	4	5	6	7
b. Raise your voice (scold or yell).	1	2	3	4	5	6	7
c. Get your child to correct the problem or make up for his/her mistake.	1	2	3	4	5	6	7
d. Threaten to punish him/her (but not really punish him/her).	1	2	3	4	5	6	7
e. Give him/her a time out.	1	2	3	4	5	6	7
f. Ground your child.	1	2	3	4	5	6	7
g. Take away privileges (like TV, playing with friends).	1	2	3	4	5	6	7
h. Give your child a spanking.	1	2	3	4	5	6	7
i. Slap or hit your child (but not spanking).	1	2	3	4	5	6	7
j. Give your child extra work chores.	1	2	3	4	5	6	7
k. Discuss the problem with child or ask questions.	1	2	3	4	5	6	7

2. If your child ***hit*** another child, how likely is it that you would discipline your child in the following ways?

	Not at all likely	Slightly likely	Somewhat likely	Moderately likely	Quite likely	Very likely	Extremely likely
a. Notice it but not do anything about it.	1	2	3	4	5	6	7
b. Raise your voice (scold or yell).	1	2	3	4	5	6	7
c. Get your child to correct the problem or make up for his/her mistake.	1	2	3	4	5	6	7
d. Threaten to punish him/her (but not really punish him/her).	1	2	3	4	5	6	7
e. Give him/her a time out.	1	2	3	4	5	6	7
f. Ground your child.	1	2	3	4	5	6	7
g. Take away privileges (like TV, playing with friends).	1	2	3	4	5	6	7
h. Give your child a spanking.	1	2	3	4	5	6	7
i. Slap or hit your child (but not spanking).	1	2	3	4	5	6	7
j. Give your child extra work chores.	1	2	3	4	5	6	7
k. Discuss the problem with child or ask questions.	1	2	3	4	5	6	7

3. If your child ***refused to do what you wanted him/her to do***, how likely is it that you would use each of the following discipline techniques?

	Not at all likely	Slightly likely	Somewhat likely	Moderately likely	Quite likely	Very likely	Extremely likely
a. Notice it but not do anything about it.	1	2	3	4	5	6	7
b. Raise your voice (scold or yell).	1	2	3	4	5	6	7
c. Get your child to correct the problem or make up for his/her mistake.	1	2	3	4	5	6	7
d. Threaten to punish him/her (but not really punish him/her).	1	2	3	4	5	6	7
e. Give him/her a time out.	1	2	3	4	5	6	7
f. Ground your child.	1	2	3	4	5	6	7
g. Take away privileges (like TV, playing with friends).	1	2	3	4	5	6	7
h. Give your child a spanking.	1	2	3	4	5	6	7
i. Slap or hit your child (but not spanking).	1	2	3	4	5	6	7
j. Give your child extra work chores.	1	2	3	4	5	6	7
k. Discuss the problem with child or ask questions.	1	2	3	4	5	6	7

Appendix 5: The Perceived Stress Scale

Instructions

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate.

For each question choose from the following alternatives:

0 = never
1 = almost never
2 = sometimes
3 = fairly often
4 = very often

1. In the last month, how often have you been upset because of something that happened unexpectedly? ☐
2. In the last month, how often have you felt that you were unable to control the important things in your life? ☐
3. In the last month, how often have you felt nervous and stressed? ☐
4. In the last month, how often have you dealt with irritating life hassles? ☐
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life? ☐
6. In the last month, how often have you felt confident about your ability to handle your personal problems? ☐
7. In the last month, how often have you felt that things were going your way? ☐
8. In the last month, how often have you found that you could not cope with all the things you had to do? ☐
9. In the last month, how often have you been able to control irritations in your life? ☐
10. In the last month, how often have you felt that you were on top of things? ☐
11. In the last month, how often have you been angered because of things that happened that were outside of your control? ☐
12. In the last month, how often have you found yourself thinking about things that you have to accomplish? ☐
13. In the last month, how often have you been able to control the way you spend your time? ☐
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? ☐

Appendix 6: The General Health Questionnaire

We should like to know if you have had any medical complaints and how your health has been in general, *over the last few weeks.* Please answer ALL the questions simply by underlining the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

It is important that you try to answer ALL the questions.

HAVE YOU RECENTLY:

1 –	been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
2 –	lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
3 –	felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
4 –	felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less capable
5 –	felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
6 –	felt you couldn't overcome your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
7 –	been able to enjoy your normal day-to-day activities?	More so than usual	Same as usual	Less so than usual	Much less than usual
8 –	been able to face up to your problems?	More so than usual	Same as usual	Less able than usual	Much less able
9 –	been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
10 –	been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
11 –	been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
12 –	been feeling reasonably happy, all things considered?	More so than usual	About same as usual	Less so than usual	Much less than usual

Below is a list of questions about how people behave, feel and react. Read each question and decide whether YES or No is the answer that best fits your behaviour. If YES applies to you, tick the YES box. If NO applies to you, tick the NO box. Work quickly, give your immediate answer and try to answer every question. There are no right and wrong answers since this is simply a measure of the way *you* react.

		YES	NO
1.	Did you like school ?	❑	❑
2.	Do you sometimes feel full of energy ?	❑	❑
3.	Are you the sort of person who rarely strikes back, even if someone hits you first ?	❑	❑
4.	Do you like parties and socials ?	❑	❑
5.	Are you easily beaten in an argument ?	❑	❑
6.	Is your daily life full of things that keep you interested ?	❑	❑
7.	Have you at times very much wanted to leave home ?	❑	❑
8.	Do you feel that no one understands you ?	❑	❑
9.	Do you sometimes feel like swearing ?	❑	❑
10.	Are you a good mixer ?	❑	❑
11.	Would you have been more successful if people hadn't had it in for you ?	❑	❑
12.	Do you sometimes feel like smashing things ?	❑	❑
13.	Do you always tell the truth ?	❑	❑
14.	Would you rather pass by someone you hadn't seen for a long time if they didn't speak to you first ?	❑	❑
15.	Do you think that the police treat people badly ?	❑	❑
16.	Nowadays, do you tend to have given up hope of amounting to something ?	❑	❑
17.	Do you very much lack self confidence ?	❑	❑
18.	Do you mind being made fun of ?	❑	❑
19.	Do you sometimes have a strong urge to do something harmful or shocking ?	❑	❑
20.	Do you like to go to parties or other affairs where there is lots of loud fun ?	❑	❑
21.	Do you feel happy most of the time ?	❑	❑
22.	Are the people who run things usually against you?	❑	❑
23.	Do people sometimes bother you just by being around ?	❑	❑
24.	Has anyone got it in for you ?	❑	❑
25.	Have you ever done anything dangerous just for the thrill of it ?	❑	❑
26.	Do you frequently find it necessary to stand up for what you believe is right ?	❑	❑
27.	At school, were you sometimes sent to the head for misbehaving ?	❑	❑
28.	Do you ever get the feeling that you are being plotted against ?	❑	❑

Population Characteristics

(A3-avw) WARD BASED UNDERPRIVILEGED AREA SCORE - AYLESBURY VALE

Definition: *Nationally standardised Jarman 8 scores*

Period *covered: 1991*

Area: *Aylesbury Vale Electoral Wards*

Source: *OPCS 1991 census sas.*

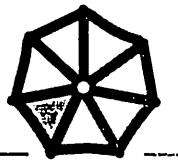
Method: *The score is the weighted total of eight transformed and standardised census variables. These variables, expressed as a percentage of all residents in households unless stated otherwise, are:*

- *elderly living alone*
- *children aged under 5*
- *residents in lone parent households*
- *residents in households with a head of household in the unskilled socioeconomic group*
- *unemployed as a percentage of economically active*
- *residents in overcrowded households - more than one person per room*
- *residents who changed address in the previous year as a percentage of total residents.*
- *residents in households headed by a person born in the New Commonwealth.*

Comments: *The Jarman Index ranks areas in order of deprivation: an area with a larger score is more deprived than one with a smaller value. The index was originally produced using 1981 census data. The same variables have been used to update the index using 1991 census data.*

Aylesbury Wards

WARD CODE	WARD NAME	JARMAN SCORE
DUEA	ASTON CLINTON	-13.03
DUEB	AYLESBURY CENTRAL	27.31
DUEC	AYLESBURY BEDGROVE	-22.82
DUED	BIERTON	-14.18
DUEE	BRILL	-5.59
DUEF	BUCKINGHAM NORTH	-8.54
DUEG	BUCKINGHAM SOUTH	-1.78
DUEH	CHEDDINGTON	-10.76
DUEJ	EDLESBOROUGH	-25.58
DUEK	AYLESBURY ELMHURST	17.89
DUEL	AYLESBURY GATEHOUSE	14.11
DUEM	AYLESBURY GRANGE	-16.35
DUEN	GREAT BRICKHILL	-18.22
DUEP	GREAT HORWOOD	-23.66
DUEQ	GRENDON UNDERWOOD	-15.64
DUER	HADDENHAM	-12.41
DUES	HOGSHAW	-9.92
DUET	LONG CRENDON	-11.19
DUEU	LUFFIELD ABBEY	-20.47
DUEW	AYLESBURY MANDEVILLE	14.97
DUEX	MARSH GIBBON	-11.11
DUEY	AYLESBURY MEADOWCROFT	19.08
DUFZ	NEWTON LONGVILLE	-19.68
DUGA	AYLESBURY OAKFIELD	-3.36
DUGB	OAKLEY	-14.77
DUGC	PITSTONE	-9.11
DUGD	QUAINTON	-23.44
DUGE	SOUTHCOURT	16.04
DUGF	STEEPLE CLAYDON	-9.02
DUGG	STEWKLEY	-8.18
DUGH	STONE	-19.40
DUGJ	TINGEWICK	-4.76
DUGK	WADDESDON	2.81
DUGL	WENDOVER	-1.32
DUGM	WESTON TURVILLE	-14.63
DUGN	WING	-18.67
DUGP	WINGRAVE	-15.94
DUGQ	WINSLOW	-8.61



Child & Family Services

Aylesbury Vale Healthcare

CHILD & ADOLESCENT HEALTH PSYCHOLOGY SERVICE

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Tel: (01296) 489951 Ext 4672

Dear

I am a Clinical Psychologist in Training working with Ann Rowland (Consultant Clinical Psychologist) at the above service. I am about to begin my doctoral research looking at the behaviour of preschool children. Please find attached an information sheet which describes the research in more detail. The research has been granted ethical approval by Aylesbury Vale Local Research Ethics Committee. It has also been discussed with local Health Visitors who have agreed to distribute information sheets/opt-in slips, during three year developmental checks, to possible participants on my behalf.

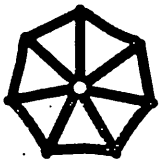
As children and parents approached will be patients of your surgery I am writing to ask if you and your practice colleagues would have objections to them being approached. I would be grateful if you could take the time to consider the research and to pass this request onto your colleagues, for their consideration. If I have not heard from you or your practice colleagues by 9th February I will assume you have no objections to me inviting your patients to participate in the research.

Please do not hesitate to contact me on the above telephone number should you require more information about the research.

Yours sincerely

Lorraine Walker
Clinical Psychologist in Training
with Ann Rowland Consultant Clinical Psychologist

Appendix 10: Opt-in Slip



Child & Family Services

Aylesbury Vale Healthcare
CHILD & ADOLESCENT HEALTH PSYCHOLOGY SERVICE
The Sue Nicholls Centre, Bierton Road, Aylesbury, HP20 1EG
Telephone (01296) 489951 ext. 4672

Dear Parent/Guardian

I am doing some research about the behaviour of preschool children. The research aims to help us understand what makes children's behaviour difficult to manage. In the future, it may also help us to help families whose children have behavioural problems, before the problems get out of hand.

The research involves parents filling in some questionnaires about family life and their child's behaviour, as well as the child completing an assessment.

I am writing to ask if you are interested in taking part in the research. If so please fill in the slip at the bottom of the page and send it to me in the envelope provided. I will then send you some more information about the research and then arrange a time that we can meet to complete the questionnaires/assessments.

Thank you for taking the time to read this letter. I look forward to hearing from you. If you have any questions about the research please feel free to contact me on the above telephone number (if I am not free please leave your name and number and I will call you back).

Yours faithfully

Lorraine Walker
Clinical Psychologist in Training

I am interested in taking part in the research into the behaviour of pre-school children.

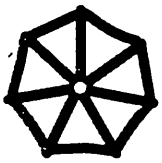
Name (in capitals) ..... Mr/Ms/Mrs/Miss

Child's name.....

Address.....

.....

Telephone Number.....



Child & Family Services

Aylesbury Vale Healthcare
CHILD & ADOLESCENT HEALTH PSYCHOLOGY SERVICE
Sue Nichols Centre, Bierton Road, Aylesbury, HP20 1EG
Telephone (01269) 489951 Ext. 4672

Research into the Behaviour of Preschool Children

Children's behaviour can be difficult to manage at times and sometimes families need help and advice about ways of managing. For some families, especially those who do not receive help, their children can continue to have problems as they get older. Understanding the development of behaviour problems a little more would help us develop ways of helping families earlier on, before the behaviour becomes too difficult to cope with and too difficult to change.

Research in this area says that a number of things contribute to the development of behaviour problems. Some researchers have suggested a new way of looking at the development of behaviour problems which combines many existing theories. My research aims to see whether this new description is correct.

All local, male, children, due to complete their three year developmental check, are being invited to take part. If you are willing to take part in the research I will visit you at home for about an hour and a half. I will check you understand what the research is about and answer any questions you may have. I will then ask you to complete some questionnaires. These ask about: your child's behaviour and character, your well being and reactions to certain situations and how you manage your children. Finally, I will complete a language assessment with your child. This looks at how well they make themselves understood and how well they understand other people, by asking them to play with some toys and answer some questions.

The information you give me will be kept confidential. I will put a code on your questionnaires (rather than any personal details) to keep your answers private. All questionnaires will be kept in a locked cabinet.

Taking part in the research is completely voluntary. You are free to pull out at any time and this will not affect your future care in any way, or that of your child. If you would like any more information about the research, please feel free to contact me on the telephone number above (if I am not free please leave your name and number and I will call you back as soon as I can). I hope you will not mind if I contact you in about a week to ask whether you would like to take part and arrange a time when I can visit.

Lorraine Walker
Clinical Psychologist in Training

Appendix 12: Consent Form

Child & Family Services

Aylesbury Vale Healthcare

CHILD & ADOLESCENT HEALTH PSYCHOLOGY SERVICE
Sue Nichols Centre, Bierton Road, Aylesbury, HP20 1EG

I ..... (full name)

of.....

.....(address)

hereby fully and freely consent to take part in this research into the behaviour of preschool children.

I understand and appreciate that the research is designed to increase psychological knowledge.

I have been given an information sheet, which I have read and understand, and which I can keep to look at in the future.

I understand that I may withdraw from the research at any time and that my health care treatment will not be affected in any way if I do. The research procedures have been explained to me by Lorraine Walker, Clinical Psychologist in Training, who has answered any questions I had.

Signed .....

Name (in capitals) .....

DECLARATION BY INVESTIGATOR

I confirm that I have explained the nature and effect of the procedures to the participant and this his/her consent was given freely and voluntarily.

Signed.....

Status..... Date .....

Stoke Mandeville
Hospital NHS Trust

Buckinghamshire Health Authority

Aylesbury Vale Local Research Ethics Committee

Mandeville Road, Aylesbury
Buckinghamshire HP21 8AL
Telephone (01296) 315000
Direct Line: (01296) 316784

5th January 2000

Lorraine Walker
Clinical Psychologist in Training
Child and Adolescent Health Psychology Service
Sue Nichols Centre
Bierton Road
Aylesbury
HP20 1EG

Dear Ms Walker

Re: NC950 - Application of the Integrative Causal Model of antisocial behaviour to the behaviour problems of pre-school children

I refer to your application to the Local Research Ethics Committee for consideration of the above project. I am pleased to inform you that the Committee approves the project on ethical grounds on the understanding that:

i. Any ethical problem, arising in the course of the project, will be reported to the Committee.

ii. Any change in the protocol will be reported to the Committee.

iii. The Data Protection Act 1984 be adhered to.

iv. There is compliance, throughout the conduct of the study, with good clinical research practice.

v. The Committee be informed if the research is discontinued for any reason.

vi. A report be submitted after completion.

vii. Ethical approval is for three years from the date of this letter

Ethical approval by the Committee is not an authority to proceed. You are advised to discuss your proposal with all heads of departments and others who might be affected, particularly if there are financial and/or staffing implications.

Please note that your research will be subject to review annually by the Committee.

Yours sincerely

PETER MANSFIELD
Secretary to Local Research Ethics Committee